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# INFORMATION TECHNOLOGY

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## BULLETIN

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Executive Office For Administration & Finance  
Information Technology Division

Winter 1998

### DOR Commissioner Seeks More Efficient Government Through IT



Mitchell Adams believes that less paper means better government and he has the awards to prove it. As Commissioner of the Massachusetts Department of Revenue, Mr. Adams

has been a strong advocate of using information technology to help create a paperless environment and to make government more efficient. This advocacy led DOR to develop its innovative Telefile tax filing system which won the prestigious Computerworld Smithsonian Award in June.

This nationally recognized award honors those who have used information technology to improve society. DOR won the

award in the category of Government and Non-Profit Organizations for its Telefile system which allows certain taxpayers to file their returns by phone and for its Imaging system that uses data recognition technology. *(Please see the IT Bulletin's Winter 1997 Issue, Volume 3, Number 1 for a more detailed description of the system.)* Likening the awards ceremony in Washington, DC to the Academy Awards for Information Technology, Commissioner Adams said that while winning the award was exciting, it is also a testament to the vision and dedication of DOR staff. "Telefile was a bold initiative that had never been done before," he said. "Our staff saw that the technology was feasible and they worked hard to make sure that it was user friendly."

The results of that hard work can be demonstrated by the number of people who now file their taxes by telephone, eliminating the tons of paper forms that used to inundate DOR each year. For example, in the last tax season, a record 400,000 taxpayers utilized the Telefile system. As a result, taxpayers benefit through a quicker refund turnaround and the state reduces costs and increases efficiency.

Telefile can accommodate taxpayers who utilize the state's short form but that still leaves approximately 1.7 million people who must file the longer Form One. DOR has solved the high cost of processing these forms — which total about 100 tons of paper — by developing an imaging sys-

tem that captures all of the data on those forms. Through a unique partnership with Unisys, DOR developed a state-of-the-art system that has increased efficiency and reduced operating costs. Following the Commissioner's edict that only proven, off-the-shelf software be used, the system has already paid for itself in labor cost savings. "We can now capture 50% more data and record it more accurately, and we deliver better services because electronic images of the tax returns are available instantly to respond to taxpayer inquiries," said Commissioner Adams. Between the two new systems, the battle of paper against computers becomes no contest, as demonstrated by the table at the end of this story.

Even with these accomplishments in hand, Commissioner Adams is constantly seeking additional improvements. On January 23, DOR recorded its one millionth Telefiler, Kathleen Bligh from Medford. However, the Commissioner would like to see more taxpayers utilize the system. He also predicts that there will soon be a day when DOR will be able to electronically deposit the refund into the taxpayer's bank account when the telephone call is completed. For innovative tax filing options, see DOR's web site at <http://www.state.ma.us/dor>.

**DOR Commissioner**

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# HR/CMS UPDATE:

## Information Session Scheduled for March

*"The project  
is on schedule*

*to meet its*

*implementa-*

*tion timetable*

*in the Year*

*2000."*

**A**s implementation of HR/CMS (Human Resources/Compensation Management System) moves forward, an informational session will be scheduled in late March in the Gardner Auditorium at the State House in Boston. At the session, user agencies and other interested parties will be given an update on the progress of HR/CMS.

Personnel Administrator Jim Hartnett of the Human Resources Division said that this project will provide an enterprise-wide human resource information and payroll system for the Commonwealth. It will replace islands of automation — the existing legacy systems — with a single, integrated system. He noted that since the project went "live" in July, the HR/CMS team headed by Patricia Wada has been working on a number of tasks, including a joint application design process (JAD) that focuses on a review of existing business practices, reviewing them against the packaged software, and developing a list of "gaps" that detail significant differences between the two. The JAD process and resulting gap analysis have entailed reviewing existing business functions such as: manage job classification and positions/budgets, on-cycle payroll, training and labor relations. This process is on track and should be completed in Feb-

ruary, with the exception of benefits administration. Once it is completed, the Executive Committee will determine a limited number of modifications to be added to the HR/CMS software and the project team will move into the next phase of the project, conceptual design.

Mr. Hartnett said the project team has also conducted a number of meetings with constitutional officers to provide updates, establish lines of communication and make sure everyone is aware of the major phases of the project and the implementation schedule. He also noted that the level of cooperation from all parties has been excellent. "The project is on schedule to meet its implementation timetable in the Year 2000," said Mr. Hartnett. He also cited a number of factors for the project's success to date, including the continued support of Secretary of Administration and Finance Charles Baker, the level of cooperation and support by and between the project's executive committee members, the leadership of Patricia Wada and her project team, the full participation from employees representing the various areas of state government and the quality of work being done by the Andersen Consulting project team staff. ♦

## DOR Commissioner Continued from page 1.

Mr. Adams has been Commissioner of Revenue since 1991. Prior to his appointment, he served in a variety of financial management and advisory positions in which he focused on developing systems and programs to maximize resources and revenues. As Vice Chancellor for Administration and Finance for the University of Massachusetts Medical Center in Worcester, he was the medical center's chief financial advisor. Before joining the medical center, he served four years as Dean of Finance and Business for Harvard Medical School. He also served as the Budget Director for Boston's Beth Israel Hospital. Commissioner Adams graduated cum laude from Harvard College and received a master's degree from the Harvard Business School. ♦

### Paper

vs.

### Computer

27 day refund turnaround

4 day Telefile turnaround

\$2.00 processing cost per return

\$1.51 cents per Imaged return,  
\$1.25 per Telefile return

2 weeks to retrieve a tax  
return from storage

Immediate data retrieval  
available

2 acres required to store tax  
returns

25 square feet of storage for one  
year of digital tax returns

325 tax returns processed  
per day per operator

618 tax returns processed per day  
per operator

Source: MA DOR

# Margaret Sullivan Named First Civilian MIS Director for State Police



**M**argaret Sullivan has been named MIS Director for the Massachusetts State Police. Ms. Sullivan, who was previously Director of Technical Services for the Massachusetts District Attorneys Association, became the first civilian to hold the MIS position for the State Police.

In her new position, Ms. Sullivan said she will focus on upgrading existing technology and implementing a number of ambitious programs. Upon her appointment last summer, Ms. Sullivan said her first order of business was to bring some cohesiveness to the agency's information technology systems.

"The State Police had been automated over an extended period of time which has led to inconsistencies in the implementation," she said. For example, the police had multiple e-mail packages which made electronic communication between various geographic areas difficult. The MIS Department is converting every office to Lotus Notes — allowing such basic functions as internet mail. It is expected that the conversion will be completed by June. In addition, the State Police will be upgrading PCs and software from WordPerfect to more current Microsoft applications.

Other major projects are planned, including the implementation of computer aided dispatch and records management software. Infrastructure is now being put in place that will connect all substations through a Wide Area Network and a pilot program has started on the implementation of mobile data which will connect officers in their cruisers to headquarters through the use of laptop computers. When fully implemented, there will be laptops in approximately 2,000 State Police vehicles. This function will allow instantaneous checks on license plates (to check on stolen vehicles, etc.) and individuals (to check for prior records, etc.). Officers will be able to send e-mail from their cruisers and file reports electronically. "This means less time on paper work and more time focused on policing," said Ms. Sullivan.

Ms. Sullivan said there are a number of other important technology implementations to come such as automating records management and replacing the overburdened Automated Fingerprint Identification System (AFIS). Work has already begun on records management. When it is completed the State Police will have the ability to collect statistical data which will help them direct resources to the appropriate areas. Ms. Sullivan said the MIS Department plans an RFR to replace the AFIS system. "It is a capacity issue," she said. "The current system is processing as many cards as is technically feasible. As more cities have the ability to transfer fingerprints electronically it will be critical that the processing speed and capacity are increased to the level where cards are handled in a timely manner for the submitting police departments."

While the implementation of these programs is a formidable task, Ms. Sullivan said she looks forward to the challenge. "It's a challenge to implement change with a small MIS department such as ours but we will be up to the task," she said. ♦

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# Electronic Commerce

## Electronic Commerce Conference Held in San Antonio

San Antonio, Texas was the site last December for a conference on Electronic Commerce at the State Government level, hosted by the National Association of State Information Resource Executives (NASIRE), the National Association of State Purchasing Officers (NASPO) and the National Association of State Auditors, Comptrollers and Treasurers (NASACT). There were 47 state governments represented, several federal agencies, and hundreds of participants. At the final policy session of the conference, the assembly unanimously approved a resolution on electronic commerce policies at the state level. In brief, the four areas dealt with were as follows:

- Adopt a simple, technology neutral and non-regulatory electronic signature and records legislation and create a uniform base-line of definitions, scope and effect for this type of legislation.
- Work through the state government initiated effort in the Internet Council of NACHA (see next column) to develop multi-state guidelines for the use of digital signatures and certification authorities. This is a private sector market based standards effort that is meant as an alternative to state-by-state or federal regulations in this area.
- Adopt the National Information Infrastructure Privacy Principles as a guide to systems requirements, business controls and future policy governing electronic commerce applications to ensure the privacy of individuals is protected in state government electronic transaction and records systems.
- Finally, it was resolved to accomplish this, state associations should agree to create a short term task force to further explore and develop the above policies and report back on more detailed policies.

## CERTIFICATION AUTHORITY RATING AND TRUST TASK FORCE

(CARAT) of the National Automated Clearing House Association Internet Council (NACHA).

The Internet Council of NACHA is home to the CARAT Task Force. CARAT is working on the development of market-based rules and standards for the evaluation and rating of certification authorities. Through participation in the pilot, and research and involvement with other industry and government efforts related to certification authority accreditation and evaluation, task force members are striving to develop a uniform regimen of metrics, processes and standards, acceptable to the private and public sectors.

Three state associations- NASIRE, NASACT, NASPO (see previous column) — and their state government members have assumed a leadership role on this issue. Through membership to the Internet Council they are working with Federal government and private sector representatives to develop a market-based means to evaluate or rate the trustworthiness and performance of certification authorities issuing digital certificates as part of public key infrastructure (PKI) commerce solution. The intent of the project is to develop standards accepted by the market that enable sound decision making for organizations which accept digital certificates issued by an outside certification authority. Work is being conducted via the Internet Council as an open and participatory forum as an alternative to legislation or regulation.

The most recent meeting of CARAT was hosted by ITD in Boston in January. At this meeting, the group focused on a proposed work product presented 1/5/98 centered on the creation of open but bounded electronic commerce trading communities. Daniel Greenwood, of ITD, is co-chair of this Task Force.

## Electronic Commerce

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*More information on these two topics is available at: [www.state.ma.us/itd/legal](http://www.state.ma.us/itd/legal).*



# Electronic Commerce

C O N T I N U E D

## Federal and State Electronic Commerce Policy Update

The Clinton Administration has continued to push a variety of curbs on the domestic use and export of encryption. This position has been controversial among industry, privacy and civil liberties groups that seek a secure electronic commerce marketplace which uses encryption. Federal legislation on the hill includes competing encryption bills (controlled and restricted vs available for use and sale); a bill by Congresswoman Eshoo that would require all federal forms to be available for submission over the Internet; a bill by Congressman Baker that would regulate and federally control electronic authentication companies and practices; a bill by Senator Bennet (not yet introduced) would create a special legal safe harbor for banks to do electronic commerce; and Congressman Castle has indicated his support for legislation that would simply remove legal barriers to electronic signatures and records (unclear when/whether we will see the bill filed). Underlying several federal bills is a policy controversy over whether or how much state laws pertaining to electronic commerce should be preempted by federal legislation.

Last year, Dan Greenwood of ITD, testified before the US House and the US Senate regarding the relationship between state and federal law in the areas of electronic commerce and information privacy. State legislation is steadily being enacted across the country that reflects the simple barrier removing approach advocated by the San Antonio resolution (see [www.ilpf.org](http://www.ilpf.org) for a survey of state laws). Massachusetts draft legislation along these lines is being prepared for filing this session by the Cellucci Administration. The National Conference of Commissioners on Uniform State Law are also drafting legislation, including proposed Article 2B of the Uniform Commercial Code (dealing with the license of digital information) and the Electronic Transaction Act (ETA) (removing legal barriers to electronic records and signatures and clarifying state electronic contracting law in the public and private sectors). The ETA cites the draft Massachusetts legislation in several sections and the Commissioners have asked the Commonwealth to assist them in defining two sections of the uniform law (exceptions to the scope and the government transactions sections).

## Online Government Task Force Report Planning Initiative

The Online Government Task Force (established by Louis Gutierrez, Commonwealth CIO) has concluded its final report. The Task Force has proceeded on the premise that state government should aggressively adopt online government solutions wherever they can be used to increase the efficiency and quality of government. The Task Force began their work by evaluating common applications which require varying amounts of security and authentication and then using those as examples to frame a Request for Information (RFI) on products and services to meet these needs. The Task Force also conducted a survey of existing and planned Online government projects throughout the Commonwealth. This survey provided an indication of current online government initiatives that are deemed important by agencies. The results of both efforts are detailed in the Task Force Report.

The Task Force report and recommendations have served as the basis of an ITD strategic planning initiative for electronic commerce and online government. The ultimate goal is to develop the infrastructure and guidance that will encourage agency innovations in this area while providing coordinated, consistent and secure access to state government services. The planning effort is coordinated by ITD's Strategic Planning Group (SPG).

As part of the plan, ITD staff will lead five interagency workgroups in the areas of Security, Policy, Technical Infrastructure and Support, Legal Policy, Application Guidance, and Common Business Processes. These workgroups will draft white papers, policy options and recommendations that will be presented for discussion at a Commonwealth Online Government Summit to be held in late Spring of this year. SPG will then draft the Commonwealth's Online Government Strategic Plan based on the Summit proceedings. Agencies can track the progress of this planning initiative by accessing ITD's Intranet site at <http://www.itd.state.ma.us>. ♦



# Who's Doing What Regarding:

## Y2K PMO Agency Interviews

ITD's Year 2000 Program Management Office (Y2K PMO) team is continuing its agency interview approach for collecting information on the Commonwealth's progress in meeting the Year 2000 challenge. While its July-October round of interviews focused on the general approaches being used by the various agencies to achieve compliance, its October-December round centered on identifying the status of mission critical and essential systems. Agencies with non-compliant mission critical systems are expected to have planned and launched remediation projects to ensure those systems will be corrected and returned to production no later than January 31, 1999. The deadline for essential systems is May 31, 1999. These dates will ensure agencies are ready for FY2000 which begins July 1, 1999.

## Commonwealth Facilities and the Year 2000

Although most Year 2000 attention focuses on non-compliant information systems, another area which cannot be overlooked is embedded systems or automated devices that use embedded chips and program code to perform their functions. Of particular concern are those embedded systems that control access to facilities and provide maintenance functions for facilities: thermostat controls, elevators, alarm systems, heating and air conditioning systems, building access, and parking garage access. As part of their Year 2000 compliance, agencies must ensure that their offices and facilities will be habitable and accessible to their employees and the citizens of the Commonwealth.

**State Owned Facilities:** The Department of Capital Planning and Operations (DCPO) and the Bureau of State Office Buildings are responsible for Year 2000 compliance at the major state-owned buildings. DCPO reports the following compliance status for its buildings:

- Transportation Building at 10 Park Plaza in Boston: All systems (energy management, chiller control panel, security system, telephone system, and fire alarm system) are compliant. Plans are underway to remediate the elevators.

- At the State Office Building in Springfield, the energy management system, which includes air handlers, chillers, boilers, and lighting systems, is in remediation.
- At the Massachusetts Information Technology Center in Chelsea, the UPS system, computer room A/C, automatic temperature control, auto transfer switch gear, chillers, elevators, and security are all Y2K compliant. The telecommunications system is currently in the assessment phase and will be compliant by January 1, 1999.

The Bureau of State Office Buildings is responsible for the McCormack building at One Ashburton Place, the Saltonstall Building at 100 Cambridge Street, and the State House.

- The State House security system, phone system, and parking garage system are scheduled for remediation.
- The badge system for the McCormack and Saltonstall buildings is compliant.
- The elevators for the McCormack and Saltonstall buildings are not controlled by computers and therefore are Y2K compliant.

**Non-State Owned or Leased Facilities:** Agencies that rent space will have to contact their landlords about facility compliance. In an effort to aid the agencies in this process, the Y2K PMO has drafted a standard letter to landlords identifying key issues. A copy of this letter is available on the ITD Y2K web site: <http://www.magnet.state.ma.us/Y2K>. Agencies are encouraged to send this letter, modified to their specific needs, to their landlords to ensure that, in terms of their physical operations, it will be 'business as usual' on January 1, 2000.

## Outreach To Local Organizations

A number of Commonwealth agencies have oversight responsibility for or close working relationships with local organizations and municipalities throughout the state. Some of these agencies are utilizing their access to and frequent contact with local organizations to aggressively increase Year 2000 awareness and promote best practices for achieving compliance. Local outreach



# The Year 2000

methods include the use of web sites and electronic transfers of information and discussions of Y2K issues in questionnaires, at conferences, and at other gatherings of their constituents. Some examples include the following:

**The Division of Banks (DOB)** developed and distributed an Officer's Questionnaire to local banks and credit unions to collect information on management's plans for addressing the Year 2000. After the responses were reviewed, the institutions posing the greatest risks are being monitored. DOB is also publishing their regulatory concerns regarding transition to the Year 2000 on their web site.

**The Division of Insurance (DOI)** has taken a similar approach. In order to increase awareness of Y2K issues, they sent a survey to 95 domestic insurance companies. The results of the survey helped the DOI to determine each company's position and status for attaining Y2K compliance.

**The Executive Office of Public Safety** is in the process of making ITD's Year 2000 Compliance, Meeting the Challenge, Second Edition available electronically to local police and fire departments with which they correspond via e-mail.

**ITD** sponsored a Year 2000 workshop on January 24, 1998 at the Massachusetts Municipal Association's annual meeting. Representatives of more than 20 cities and towns attended the workshop which covered an overview of the problem, a discussion of the primary project phases, and the effect on cities and towns.

## Year 2000 and the Federal Government

Many agencies that exchange data with the Federal Government have been concerned about the status of the federal Year 2000 compliance project. As of this writing, the Office of Management and Budget (OMB) has accelerated federal target dates for completion of remediation and implementation in order to "assure that agencies have sufficient time to test their mission-critical systems in production settings". Remediation, previously scheduled for completion by December 1998 has been moved to September 1998; implementation, previously scheduled for completion by November 1999 has been moved to March 1999.

In addition, OMB has announced several key target dates concerning state/Federal interfaces. Federal agencies are expected to complete their inventory of data exchanges with the states by February 1, 1998 and publish the format of and schedule for data exchanges with the states by March 1, 1998.

While some Federal agencies are on target with their remediation, OMB recognizes that the progress of a number of other agencies is problematic and it is not averse to using its authority to dictate how agencies spend their IT budgets in FY 1999. More information regarding the Federal Government's Year 2000 project can be found at: <http://www.cio.fed.gov/Y2Knov97.htm>

## Y2K Odds and Ends

- The next Y2K Day will take place on March 19th, from 9 a.m. to 1:30 p.m. on the 21st floor at One Ashburton Place in Boston. Topics will include testing and testing tools.
- The PMO is developing a Year 2000 Statement of Compliance Status to help agencies document their compliance status for upper management and interfacing organizations. The statement will indicate what items are compliant and will provide a brief description of compliance criteria. It is expected that the Y2K Statement of Compliance will be available to the agencies by the time this bulletin goes to press.
- The Data Center in Chelsea has developed an Agency Year 2000 Test Support Manual which describes the resources that the Data Center can provide to agencies for testing and the steps which should be taken by agencies to ensure a successful test program. The manual is available on the ITD Y2K Web Site or by requesting a printed copy from the Y2K PMO by phone at 617-973-0907.
- A letter to vendors requesting Y2K compliance information has been drafted by the PMO and approved by ITD's legal staff. The letter, available on the ITD Y2K web site, requests that vendors list their products, each product's compliance status, and expected date of compliance. It also requires the signature of an authorized representative of the vendor.

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# IT Bond II Update:

## *Some Early Successes*

### **The Firearms License Imaging Program (FLIP)**

Massachusetts General Law, Chapter 140, Section 123, requires all licensed gun dealers, as well as individual private citizens, to report the sale of any firearm to the Massachusetts Firearms Record Bureau (FRB). Between 1985 and 1997 alone, more than 720,000 gun sale transactions have been reported to the Bureau, and an average of one thousand (1,000) new sales are recorded each week.

The forms required to record a gun sale transaction are mailed to the FRB and, until recently, they were put in file drawers or boxes. Because of shortages of personnel and other resources, the information written on the various forms was never entered into any type of automated system. As a result, the massive amounts of data collected by the Bureau were of no benefit to anyone, especially police officers wishing to trace the origins of guns located at crime scenes or recovered in some other fashion. In fact, because of the way the paper records were stored, it could have taken an employee more than five hundred and eighty-three hours (almost seventy-four working days) to conduct a single search.

Realizing the importance of the data stored on gun sale records to public safety in general, and to law enforcement specifically, the Criminal History Systems Board embarked on a mission to automate the FRB's gun sale records. Using IT Bond II funds, the agency enlisted the services of IDP, Incorporated, located in Sudbury, Massachusetts, to build an imaging system and to supply the software and indexing services necessary to create and populate a LAN-based electronic index. As a result, all of the FRB's gun sale records have now been digitized and placed on CD-ROM. In addition, FRB personnel have PC access to the LAN-based image index, allowing them to search the gun sale files for individual purchases in seconds and to view and/or print images of individual gun sale records. In the first month of the system's availability, the Bureau was able to conduct gun traces for more than 20 police departments and Federal law enforcement agencies, assisting them in on-going investigations involving firearms related crimes.

### **Auditor's Hardware Improvements Enable Advanced Applications**

The Office of State Auditor A. Joseph DeNucci is using its IT Bond II funds to rework the manner in which audit information is collected, analyzed, and disseminated. Prior to the release of IT Bond II funds, the OSA relied exclusively on an antiquated Wang VS for word processing and database applications. The computer hardware inventory consisted of a number of Wang dumb terminals augmented by a few dozen PCs, only a few of which were Pentium class, wired into the Wang VS. These computers were used primarily for the production of audit reports and for administrative purposes. There were only a few notebook computers assigned to field operations and they were of the 486/33 class. The sheer lack of computers and software, combined with the age of the existing computers, prevented the OSA from taking advantage of the new technology in its audit work and in its day to day business.

Since the release of its IT Bond II funds, OSA has developed and installed an Enterprise Network consisting of seven LANs spread throughout its offices in the Commonwealth. This network brings to the OSA a tremendously enhanced level of connectivity. OSA Regional Offices are in direct communication with the administrative center as well as with all of the other regional sites. All OSA employees are linked to an Email system allowing for nearly instantaneous transfer of information and documents. The only 486 class computers remaining in use are those used to convert old Wang Documents to Microsoft Word documents.

Individual field auditors now have access to the Information Warehouse and other resources from remote sites, eliminating the need to travel either to a regional office or into Boston to access this information. They can communicate with the regional offices and administrative centers from remote audit sites and communicate with managers and audit supervisors via Email through the remote access capabilities of the network. The network removed some of the delays that time and distance impose on the audit process.

**IT Bond II Update**

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# "TAB" Assists Agencies in Meeting Their Telecom Needs

Numerous changes in both the telecommunications industry and technology have had a great impact on how Commonwealth agencies accomplish their specific mission. The emergence of innovative service and equipment offerings from a growing number of companies has led to a greater demand by agency personnel and the general public for more advanced features. The Commonwealth's totally revised procurement procedures as well as innovative contract features have presented Agencies with more cost effective and efficient ways to process their incoming and outgoing calls, provide automated information delivery, and increase "customer" satisfaction.

The Telecommunications Advisory Board (TAB) was formed to assist agencies in meeting these growing information needs. The TAB is an informal group made up of individuals from various agencies who have one thing in common: they are responsible for their agency's telecommunications systems.

Formed under the direction of Frank Burns, Manager of Information Services for the Communications Services Bureau at ITD, the TAB presents an opportunity for agencies to share information regarding vendor offerings, billing issues, new services, system management and much more. Each month the TAB meets to discuss current issues in the telecommunications industry, recently completed procurements, as well as issues directly affecting agency systems and performance. In addition, the TAB conducts informational sessions provided by vendors and other telecommunications professionals to keep agency personnel aware of the latest products and services.

"We believe that the agency itself is in the best position to know the optimum solution for their telecom needs," stated Mr. Burns. "The TAB allows members to make informed decisions based

on current information and other agencies' experience with the same service, product or vendor."

The TAB, facilitated by ITD/CSB, is open to all agencies and individuals at all levels of experience. "The best part of the TAB is that you can attend those sessions or seminars that fit your level of experience or interests," Burns said. "We've had sessions which provide telecommunications basics as well as advanced computer telephony applications."

An example of the type of services provided by the TAB were the four seminars instructing agencies on how to insure that their systems were ready for the new area code changes taking place in Eastern Massachusetts.

TAB members have also served as members of Procurement Management Teams (PMTs) for various statewide telecommunications contracts such as the Centrex Services Contract, the Premises Based Telephone System Contract and the Telephone System Maintenance Services contract.

The TAB continues to evolve as the telecommunications industry and agency needs change. In the next few months, the TAB will begin a series of seminars on various topics including advanced messaging (voice, fax and e-mail), how to use the Internet, and telecommunications system management.

"Our goal is to provide agencies with the information they desire most," explained Mr. Burns. "The TAB will continue to adapt to the needs presented by its members — the agencies — and serve as that information source into the future."

For information on the Telecommunications Advisory Board, contact Frank Burns at 617-973-0080 or at [Frank.Burns@state.ma.us](mailto:Frank.Burns@state.ma.us). ♦

## Year 2000 Continued from page 7.

### Auditor's Year 2000 Report

On February 3, 1998 the Office of the State Auditor, A. Joseph DeNucci, issued its 'Report on the Preparedness of the Commonwealth of Massachusetts to Address the Year 2000 Computer Date Issue.' The report is available at the Auditor's web site, <http://www.magnet.state.ma.us/sao/>, or at the Commonwealth's Y2K site, <http://www.magnet.state.ma.us/y2K/>. ♦



# Motor Voter Moving Forward

**T**he Commonwealth's Motor Voter system, having overcome some initial start-up problems, is now fully implemented and gaining new supporters.

Under the federal National Voter Registration Act, Massachusetts was required to allow residents the opportunity to register to vote when applying for or renewing a driver's license. This required a new system that would not only connect the Secretary of State's Office with the Registry of Motor Vehicles, but it also required a direct connection to every town clerk's office in the Commonwealth. After replacing the vendor that had been chosen prior to his election, Secretary of State William Galvin and his staff worked to address the complexities created by the Motor Voter law and implement the system statewide in a way that would meet and exceed the requirements of the law.

With the exception of the Elizabeth Islands town of Gosnold (which has no direct telephone line to the mainland), the clerk's office in every city and town in Massachusetts is now connected to the Secretary of State's Office. The Secretary's Chief of Staff Jack McCarthy said that with the system in place, there has been an increase of approximately 100,000 additional voters since 1994. The system has also resulted in increased efficiencies for the Secretary of State's Office and the town clerks.

For example, when they register a new voter, town or city clerks can search the data base for duplicates and produce a cleaner list for their election activities. The system has also made it easier

to certify signatures on initiative petitions — a time consuming task that frequently missed duplicate signatures. Mr. McCarthy said that as the clerks become more familiar with the system, particularly those that use Microsoft Access, they are becoming more comfortable with it.

The system has come along slowly, but now some of our earliest critics have become the system's most vocal supporters," said Mr. McCarthy. While he is pleased with the results to date, Mr. McCarthy also noted that there is still some work to be done,

citing his desire to "tighten up" the flow of information between the Registry of Motor Vehicles and his office. The Secretary is also exploring the possibility of sharing the system with other agencies.

*"No other state has comparable technology in place," said Mr. McCarthy. "Once again, Massachusetts is setting the standard."*

"I believe that we are the only agency with a direct link to every city and town and that may open up some opportunities for others," he said. Because town clerks issue hunting, fishing and other licenses, Mr. McCarthy pointed out that there may be a benefit in the motor voter system to an agency such as Fisheries and Wildlife which must keep track of each license issued. With the project's success, other states are looking at the system, as well.

Representatives from Minnesota, Michigan, Texas and Canada have already come to view the system. "No other state has comparable technology in place," said Mr. McCarthy. "Once again, Massachusetts is setting the standard."

For more information, call Jack McCarthy at 617-727-9180. ♦

## IT Bond II Update

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As the project moves into the second phase, its focus has shifted from the acquisition and deployment of resources to the design and implementation of an audit process that will take advantage of the new technology. This phase includes the design of audit workpapers for the specific and somewhat unique needs of OSA. In addition, this phase will see the conversion and migration of data from the Wang VS to a new system designed to utilize the new technology. The changes currently being planned include a database that will provide the information needed for audit scheduling and tracking, as well as housing the data for new administrative and personnel systems. Over the next 18 to 24 months, OSA will be developing and implementing new audit programs and procedures that exploit the new advances in technology. ♦



# ***New Data Center Options and Opportunities***

**T**he change to CMOS (Complementary metaloxide semiconductor) enterprise servers at ITD's Data Center located at the Massachusetts Information Technology Center (MITC) in Chelsea has cut the floor space required for "mainframes" from 1,000 square feet to 44 square feet. The change to CMOS has cut the dollars being spent on CPU power usage from \$12,000 per month to about \$500 per month.

CMOS includes ESCON (Enterprise System Connectivity) optical fiber connections between a mainframe and its peripherals that replace the cumbersome cables under the computer room floor. The ESCON fiber connections increase the speed between CPU and peripherals from 4mb per second to 17mb per second, yielding better processing speed and faster throughput.

ITD's Data Center mission is to increase service and reduce cost while continuing to meet the needs of its customers. The new servers decrease cycle time by 27% which means that on-lines can be kept up longer. And since the over-night cycles end sooner, applications like the Commonwealth's Information Warehouse can be brought up earlier. So CMOS will increase applications' availability to users.

But according to Ralph Ragucci, Data Center Director, the real story about the change to CMOS is how it positions the Data Center for the future. Having installed the new enterprise server to replace its earlier mainframes, ITD is now able to install a new operating system, Open System 390 (OS390) with its broader range of capabilities. CMOS with OS390 will be able to run Oracle, Unix, NT, Java, and GUI tools on this "mainframe". This means that the new enterprise server, while continuing to support traditional mainframe protocols and applications, will also be able to support Web development and Electronic Commerce within the security and recoverability of the "mainframe" environment. The new architecture also enables integrating the mid-range environment into the new "mainframe" environment and potentially having fewer and more stable servers to manage and support in the future. In this new environment where client/server systems will co-exist with "mainframe" systems, developers will be able to utilize the best capabilities offered by both.

CMOS was installed at MITC in mid-December. The OS390 installation will be completed by June 1998. OS390 is Year 2000 certified and supports logical partitions (LPAR) which will enable establishing a region for Year 2000 testing with future dates on the same box while continuing day-to-day processing using current dates. These attributes will facilitate the Data Center's remediation and testing of all the hundreds of pieces of software that support applications - as well as facilitating applications testing itself.

After completing the OS390 installation, ITD's Data Center will be able to offer new services such as distributed printing. This will enable high-speed laser printing on 8 1/2 by 11 inch paper from systems located elsewhere on different platforms but networked directly to the Data Center printer using a TCP/IP connection. The printers support graphics that will permit printing "forms" and data simultaneously, saving the time and cost of printing special forms. Distributed printing will also improve the service options available through DocumentDirect and ViewDirect where it is now possible to view reports on-line and print only those pages needed in hard copy.

To streamline the management of the IT infrastructure and provide comprehensive and proactive control and monitoring of the mainframe, client server, and network resources, ITD will offer an integrated enterprise management solution. This will enable the Data Center and its users to manage all IT resources, encompassing heterogeneous networks, systems, applications, and databases. The integrated management offering will cover network discovery, topology, performance, alerts, events and status, security, software distribution, storage, workload, help desk, and change management.

To take advantage of these new Data Center options and opportunities - or for more information - contact Ralph Ragucci at 617-660-4401 or at [Ralph.Ragucci@state.ma.us](mailto:Ralph.Ragucci@state.ma.us). ♦

## INFORMATION TECHNOLOGY DIVISION

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## A MESSAGE FROM THE CIO

Many of you, for various reasons, are planning to implement or grow Windows NT-based departmental networks.

The design of most networks is usually, as the saying goes, a "non-trivial" task. ITD's Network Applications Planning Group has worked with Systems Engineering Inc. and New Technology Partners to put together design guidelines for Windows NT networks.

The resulting document includes helpful insights into domain setup strategies, naming conventions, and considerations for eventually upgrading to the "active directory" in Windows NT 5.0.

For executive departments this guidance should be construed as official.

Pick up a copy at <http://www.magnet.state.ma.us/itd/>

T. Louis Gutierrez



# INFORMATION TECHNOLOGY

## BULLETIN

Vol. 4 No. 2

Executive Office For Administration & Finance  
Information Technology Division

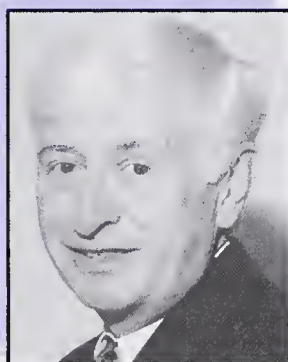
GOVERNMENT DOCUMENT  
COLLECTION  
Spring 1998

### Commonwealth's Personnel Administrator Discusses HR/CMS

JUL 18 1993

University of Massachusetts  
Depository Copy

James J. Hartnett, Jr., is Personnel Administrator for the Commonwealth and heads the Human Resources Division. With over two decades in state government, Jim has seen (and spearheaded) plenty of changes in the way the Commonwealth handles human resources planning and delivery. One of his current roles is serving as Chairman of the Executive Committee for the new, statewide Human Resources and Compensation Management System (HR/CMS). We met with him recently in his third floor office of the McCormack Building to talk about the new system.



**Q: Why do we need another computer system? What's wrong with what we've got?**

A: Look around you. You can see how quickly the world is changing. Our Commonwealth computer systems were put in place in a different world. Today, we expect and need easier access to data in order to plan, to make decisions and to combine with other data for analysis. Today we expect that ordinary people, not just the computer programmers, will be able to access and use information technology. HR/CMS is giving us the chance to bring all of our HR and payroll systems up-to-date and make them ready for the demands of the next century. We will stop duplication of effort, improve our information for planning purposes, and save money for the state.

**Q: What are the most significant changes going to be?**

A: That's too big a question to answer adequately in a brief interview, but let me give at least a beginning answer. Many more people will be using computers (some for the first time) and many people in the payroll and human resources functions will be using new applications. We are working very hard to see to it that the right training will be offered at the right time. A little further down the development pike, I'd be pleased to talk about the business changes in detail. Two of the earlier changes that will occur are direct paycheck deposit and bi-weekly payroll, both of which will result in improved efficiency and cost savings.

**Q: What's the timeframe for the project? When is all this going to happen?**

A: The whole project has an estimated timeline of 32 months with implementation in the spring of the year 2000. We — by that I mean the Project Team — have completed the "Requirements Definition" phase of the project. We compared the new application software to the way we now do business. In order to do this, we brought in department representatives right from the beginning. If there were gaps between the new software and current practices, we had a choice: change the way the Commonwealth does business or modify the software. We made the choice to modify our business processes, not the software. The next phase is "Application Design" — where the software and modifications de-

sign will be fine-tuned to the Commonwealth's needs. Then we move to "Application Development and Test" the first of next year — that's when the bulk of the programming will be done.

The Change Management Team is already hard at work to smooth the transition. Many of your readers have probably received surveys to fill out. The Team is analyzing the impact HR/CMS is going to have, what kinds of training people are going to need, and how best to deliver it.

**Q: Who will benefit from this new system?**

A: We all will. The project brings significant long-term benefits: to state employees who count on these systems to correctly compute their payroll and benefit programs; to HR and payroll personnel who rely on these business systems to

**Personnel Administrator**

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# Family Net Up and Running

An important milestone was reached in February when the Department of Social Services (DSS) fully implemented its Family Net program. Formerly known as SACWIS – the Statewide Automated Child Welfare Information System – Family Net will significantly reduce the amount of time that child protective workers spend on paperwork providing more time for focusing on their clients.

After almost three years in development, the application is now up and running and providing benefits to DSS and its clients. DSS provides services to over 21,500 families each day. It is organized into six regional offices (West, Central, Northeast, Metro, Southeast and Boston), which oversee the day-to-day operations of 26 area offices throughout the state. DSS has an operating budget of approximately \$450 million and a staff of approximately 2,800. Over 2,200 of the staff are direct service workers, including social workers, adoption workers, family resource workers and foster care reviewers.

Each of these workers now has a computer at their disposal because of Family Net. By replacing typewriters, repetitive paper forms, case records and file cards, Family

Net provides DSS managers and field staff with direct on-line access to a wide variety of information which is essential to the more effective delivery of services. While the vast majority of the new computers are desktops, foster care reviewers and emergency response staff are also equipped with laptops that they can bring into the field.

With these tools in hand, the benefits are numerous and include:

- More accurate evaluation of a child's risk of abuse;
- Greater amount of social worker time with children and families;
- Better and quicker matches for foster/adoptive children with available homes;
- Immediate access to up-to-date lists of available services;
- Immediate on-line application for emergency Medicaid coverage;
- On-line data sharing and consumer matching between agencies;
- Trend analysis ensuring a correct mix of services availability;
- Communications across job functions via production of legible and on-line documents.

These benefits have become immediately available due to the smooth transition from a paper dependant agency to a virtually paperless environment. Pat Mastrangelo, Manager of Application Development at DSS credits this to advanced planning. "We started rolling out the project over a year ago," she said. "This allowed the staff to bring themselves up to speed before the February implementation." Ms. Mastrangelo said that it was important for everyone to have a basic understanding of the technology. Users were given time to familiarize themselves with their computers and specialized training was provided that was specific to each job task.

Now that Family Net is up and running, Ms. Mastrangelo expects that DSS will see savings in both staff time and money. But she said the most important aspect of Family Net is that it will allow DSS staff to spend more time on the real work that needs to be done – not paperwork. ♦

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## Personnel Administrator

Continued from page 1.

do their jobs; to state managers who base their decisions on information from these systems; and to the taxpayer who has every right to expect efficiency from the state.

### **Q: What will it take for the project to be a success?**

A: I see several keys to success, the first of which is to continue the solid partnership and teamwork we've developed among all members of the Executive Committee, project team, agency heads and many of their staff. I also want to give special mention to the quality leadership and tireless efforts of Project Team Directors, Patricia Wada from HRD and Rick Hegwood of Andersen Consulting. All of these people working together for the greater good of the Commonwealth are an example of interagency cooperation at its very best. I'm proud to be affiliated with such a dedicated group of individuals.

Other key factors for success will be openness to change in existing business practices and procedures; working proactively with organized labor; providing training sufficient to prepare the workforce for transitioning into the new system; and the commitment to focus on technology readiness so that we will be fully prepared to move into each new stage of the project. ♦



# Senate Clerk's Information Officer Expands Use of Technology



Jim Proctor has been an employee of the Senate Clerk's Office since 1973. At that time, the Legislative computer system consisted solely of flat-file bill history system that merely told its users where a bill had been in the legislative process.

Mr. Proctor took over the computer operations in 1978, at the same time the

Legislature started using TextDBMS software, a fourth generation programming language that runs within the mainframe's CICS operating system. His first work was to rewrite the bill tracking system to include the use of searchable databases and the ability to access matters by committee reference, sponsoring member or subject content. He also introduced program-driven coding to the bill history applications. This enabled the Clerk's office to use the computer to produce various statistical reports, as well as the Legislative Bulletin of Committee Work, saving substantial time and money in its publication.

Much of the work of the Legislature involves the publication of information. The Clerk's office is responsible for publishing a wide variety of data including the text of pending legislation, journals, calendars, reports, rules and manuals. "As computers and my knowledge of them evolved, I was able to envision how to develop applications to produce many of these publications," said Mr. Proctor. "I initiated and managed a project to build an interactive menu-driven transaction processing system to construct the bulk of the Journals and Calendars."

As the Legislature started to replace 3270 terminals ("We still have several if anyone is interested in how computers worked in the Pleistocene Era," joked Mr. Proctor) with PC's, they developed the ability to transfer files from the mainframe and work on them within Word Processors. One of the applications has been rewritten (the Legislative Bulletin) to operate in a client-server environment. The interface is Windows based with the data built and stored on the mainframe computers. Eventually, he hopes to rewrite all of the applications to provide a Windows-based interface and use a centralized network for distribution and handling of common files.

Many of the methods and techniques being implemented have been tried and tested by other state legislatures. "I am fortunate to have been able to attend the annual meetings of the Information Technology staff section of the National Conference of State Legislatures. The meetings and seminars of that organization have imparted a great deal of information about the technological functioning of the various state legislatures," said Mr. Proctor. "This has proven to be a valuable resource for delineating the options available to us for improving the delivery of the services we provide."

In November of 1994, the Legislature issued a report entitled "Using Technology to take the Massachusetts Legislature into the 21st Century". With that report, the legislature recognized that improving its use of technology could increase its efficiency and the public's access to important information. A direct result of that report was the installation of computer networks in each branch of the Legislature. The Legislature's report also recommended making legislative information available to the public electronically through the Internet. Since he had been involved with the development of the mainframe programs that created much of the data the legislature would publish, Mr. Proctor said he was asked to work on converting those files to HTML. "With a great deal of help from Sarah Bourne of ITD, we unveiled our first offerings on the state's WEB site in July of 1995. Our initial offerings included bill history information, committee files, committee hearing lists, member profiles and the State Constitution," he said.

Mr. Proctor sees the Internet as a powerful tool for increasing the public's access to the legislative process. "With the support and commitment of Senate President Thomas F. Birmingham and the Speaker of the House Thomas M. Finneran, we have been constantly working to improve our WEB offerings," he said. The Legislature has added the text of all laws passed since 1997 and the most recent addition has been the publication of the General Laws. (See story on page 10.) This project involved converting over 23,000 files to HTML format which took over four months. They are now working to update those files to include laws that have been passed since the conversion process began. Mr. Proctor expects to continue expanding the legislative information available on the WEB. ♦



# IT BOND UPDATE:

## AG's Office Migrates Case Management System

The Massachusetts Attorney General's Office reached a significant technological milestone recently with the successful (on time and under budget) migration of its case management system from a Wang to network environment.

"This new case management system is a great example of making government work better for us all," said Attorney General Scott Harshbarger. "This office has a huge caseload, ranging from criminal investigations and prosecutions, to antitrust and consumer protection matters. The new system is efficient and user-friendly, enabling us to better serve our clients on behalf of the Commonwealth and its taxpayers."

Work on the project began in June, 1997 when the AG's office hired IBM to conduct a requirements analysis and identify an off-the-shelf case management system that best met the AG's needs.

The AG's old system was a COBOL data base typically used by private law firms and did not adequately meet the needs of a diverse office such as the Attorney General. "There were a lot of square pegs being put into round holes," said Maryclare Querzoli the AG's MIS Director.

Because the system was developed for law firms, it was client driven and geared to cases being billed to clients. But the AG's Office does not bill the agencies it represents and handles many cases where the client is the public. This made it difficult to track cases that did not involve agencies or where multiple agencies are involved in a case. Eventually, these divisions independently developed a number of secondary systems to manage their individual caseloads.

The AG's office believed that a single application could enhance both the management of the caseload and the handling of the casework itself. IBM was charged with providing answers to four questions:

1. Should there be one system or separate systems for each bureau or division?
2. What platform should be used?
3. Would the cost be within budget?
4. What security issues needed to be resolved?

To begin, IBM asked each of the six bureau and 25 division chiefs to complete an in-depth 30 page questionnaire. Upon completion, IBM analyzed the data and conducted follow-up interviews with

the respondents. "This gave us the raw data that allowed us to tackle the four objectives and design a prototype system based on the input," said IBM's Project Consultant Mike Mell. The prototype that was developed using this input utilized Lotus Notes as the platform. Modifications were then planned in five databases:

- Pre-litigation (investigations)
- Litigation (court cases)
- Compliance Monitoring (settlement or litigation)
- Projects (non-case related work)
- People (conflict checking)

Working groups that included managers, attorneys, investigators, support staff and paralegals were set up to review each database and weekly meetings were held to gather input. "It was important that the ultimate users had input," said Ms. Querzoli. "Once agreement was reached on a subject we would move on." Lead support staff from each of the divisions were chosen to participate in the test pilot. Training sessions were followed up with one-on-one sessions at the division leads' desks. A commentary database was built into the test pilot for the participants to log in concerns, ask questions and report problems with the system. The commentary database logged in over 200 comments and suggestions from users, most of which were addressed in the final release or marked for a future upgrade.

As the successful implementation moves forward with the upgrading of specific desktop units, the AG's office sees a number of benefits resulting from the new case management system, including:

- A single system with a consistent look and feel on which each division can track their individual data;
- Reduced maintenance costs;
- More productive desktops through e-mail, word processing and calendar integration;
- The ability to check on conflicts in a secure manner;
- The ability to easily make changes or upgrades, and;
- One system that will track the full span of a matter from investigation to litigation and appeal and through compliance.

"The AG's Office now has one customized system that optimizes the similarities but understands the differences between the divisions," states Ms. Querzoli. ♦



# Open/Close Meeting

## *Focuses on Information Technology*

**I**t was standing room only again at the Federal Reserve Bank in Boston as the Commonwealth conducted its annual Open/Close meeting on April 16 sponsored by the Office of the Comptroller. As with past sessions, Information Technology was high on the agenda.

In his opening remarks, Secretary of Administration and Finance Charles Baker reiterated that Y2K continues to be a priority and touted HR/CMS (the new Human Resources/Compensation Management System being developed) as an upcoming technology. He also offered thanks and congratulations to all in attendance as he reported that the Commonwealth's fund balance has gone from minus \$1.9 billion in 1991 to a positive \$1.1 billion this year — a positive change of \$3 billion over seven years.

Louis Gutierrez, Chief Information Officer for the Commonwealth reminded those in attendance that the Year 2000 is fast approaching and "by next year it will be too late". In fact, he said that as of April 12th, there were only 425 work days until January 1, 2000 and 299 workdays until January 1, 1999.

His three recommended steps to Y2K compliance included inventory and assessment of systems, replacement or remediation of systems with 2-digit date fields and, testing. Systems that he mentioned need particular attention included Banyan and Novell networks, windows 3.1, 3.11 and early Windows 95 software, agency developed systems and, third party software and hardware. Mr. Gutierrez pointed out that help is available through his agency's Y2K Program Management Office and Y2K information is available via the web at [www.state.ma.us/itd](http://www.state.ma.us/itd).

Following Mr. Gutierrez, Gary Lambert from the Operational Services Division reviewed the Commonwealth's equipment policy and thanked the Procurement Management Teams for their assistance. Personnel Administrator Jim Hartnett provided an

update on HR/CMS and introduced its project team. He stated that because of everyone's hard work, the Project's Phase One requirements have been completed on time. He also reminded everyone that the keys to HR/CMS' success include developing solid partnerships, being open to change and focusing on training and technology readiness.

Information Technology was a strong component of the presentation by Kyle Keady of the Treasurer's Office. Tom Graf, Budget Director, Fiscal Affairs Division, mentioned the successful implementation of automated spending plans, thanked the audience for their support of this effort and promised continued reliance on automation in the budget process. Comptroller William Kilmartin (who it was announced will be the recipient of the prestigious National Public Service Award) said that the driving concept for the agenda of government improvement for the next five years will be cross boundary coordination and communication -- an important aspect of Information Technology. As an example, he cited Electronic Benefits Transfer, which cuts across program, organizational, jurisdictional and sector boundaries.

This theme continued as Deputy Comptrollers Susan Kanak, Martin Benison and Elizabeth Kilcoyne touched on the importance of Information Technology in their presentations. Ms. Kanak provided an update on Y2K, discussed three MMARS Web pilot projects (Vendor Web, Manager's Web and Warehouse Web) and reviewed her agency's goal of creating a paperless payroll system. Martin Benison discussed how changes to the state's closing and reporting schedule will help improve quality and streamline the overall effort while Elizabeth Kilcoyne set goals for the Comptroller's Payee and Payments Project. All of these efforts will be dependent on Information Technology. ♦



# ***Who's Doing What Regarding:***

## **CIO Testimony**

On March 11, 1998, Louis Gutierrez, the Commonwealth's Chief Information Officer (CIO), testified before the House and Senate Science and Technology Committee on the status of the state's Year 2000 compliance effort and to request approval of a new supplemental budget for Year 2000 projects. The Committee endorsed the commitment required for the success of these projects, and the Legislature is deliberating on a \$20.4 million supplemental budget. In addition, the Legislature has approved a sunset clause (expiring June 30, 2000) giving the CIO additional authorization to coordinate and oversee the year 2000 compliance efforts of the executive departments.

## **Status of Agency Year 2000 Efforts**

Based on information collected by the ITD Year 2000 Program Management Office (Y2K PMO) team for October through December 1997, 170 state agencies are involved in Year 2000 projects to ensure the uninterrupted delivery of services through the turn of the century. At the heart of this effort are 131 agencies working to ensure the compliance of 217 mission critical and 170 essential systems. The Commonwealth's goal is for mission critical systems to be corrected and returned to production by January 31, 1999 and essential systems by May 31, 1999. As of the fourth quarter of calendar 1998, 95% of our 390 mission critical and essential systems were scheduled to meet this goal. The remaining 5% had scheduled completion dates extending into the January to July 1999 timeframe.

The Y2K PMO is continuing to interview agencies, especially those at high and medium schedule risk, to monitor progress, and assist agencies in finding ways to accelerate their schedules. For agencies with mission critical systems that appear to have significant difficulties in meeting the January 1, 1999 deadline for implementation, the PMO will be requesting that they begin to develop formal, documented contingency plans. The PMO is available to assist agencies with their contingency planning.

## **PC BIOS and the Year 2000**

A significant part of any Year 2000 project includes the verifica-

tion of an organization's personal computers. PC compliance means the hardware as well as the operating system, software, and applications will function without anomalies due to the turn of the century. Verifying proper operation of the hardware means verifying that it correctly stores and maintains date and time regardless of the century value. This is frequently referred to as the PC BIOS problem.

Year 2000 problems occur when the BIOS fails to store, incorrectly stores, or fails to read the century value. The BIOS for many older PCs only reads the last two digits and assumes the first two are "19". In other cases, a PC will correctly store and read the century date but will not reset the century value when appropriate.

A common misconception is that if a PC is new (purchased within the past 2 years), then it must be Year 2000 compliant. However, according to a study done by Greenwich Mean Time, a company specializing in Year 2000 issues, "79% of pre-1997 BIOS chips could not rollover from 1999 to 2000 and 14% did not know the year 2000 was a leap year." Therefore, it is strongly suggested that organizations inspect every PC to ensure compliance.

In March, ITD's Y2K PMO launched a series of workshops on PC compliance strategies. Agencies were encouraged to send representatives from their technical staffs to the workshop, which included training on two free PC BIOS test tools (NSTL YMark2000 and RighTime Test2000), a set of diskettes with the tools, step-by-step written procedures, and information on how to interpret the results of the tests. While it is not known at the time of this printing if the workshops will still be offered, anyone interested in the workshop information should contact Bob Lebel at the PMO at 617-973-0913 or by email at [robert.lebel@state.ma.us](mailto:robert.lebel@state.ma.us).

For more information on the PC BIOS problem: identifying it, correcting it, and the impact of not correcting it, see PC BIOS and the Year 2000, A White Paper on ITD's Year 2000 web page at <http://www.state.ma.us/y2k>.



# The Year 2000

## Auditor's Report on Year 2000

On February 3, 1998, the Office of the State Auditor released their Report on the Preparedness of the Commonwealth of Massachusetts to Address the Year 2000 Computer Date Issue. This report summarized and evaluated the responses received to the Auditor's survey distributed in April 1997 to over 600 state agencies and municipal and local governments and organizations. The report also included the Auditor's recommendations on how best to improve areas that showed signs of weakness. For the complete text of the report, see Auditors Y2K Report on ITD's Year 2000 web page at <http://www.state.ma.us/y2k>.

## Commonwealth Outreach

The PMO salutes the efforts of agencies seeking to raise awareness of Year 2000 issues to other entities in the state.

- The Office of the State Auditor distributed copies of its Year 2000 Survey Results report (see above) along with the PMO's *Year 2000, Meeting the Challenge*, Second Edition to every city and town in the Commonwealth.
- The Public Employee Retirement Administration Commission (PERAC) distributed a survey to all retirement systems within the Commonwealth that includes a section on Year 2000 compliance issues.
- Mr. Val Asbedian, Director of ITD's Strategic Planning Group, provided a Year 2000 presentation on March 10, 1998 at the Association of Government Accountants meeting at Bentley College.
- On March 24, 1998, Mr. Asbedian also participated in the University of Massachusetts Medical Center Executive Presentation at the State Laboratory Institute at Jamaica Plain.

## June Year 2000 Day

The next Year 2000 Day will take place on June 30, 1998 from 8:30 a.m. to 12:30 p.m. on the 21st floor at One Ashburton Place in Boston. Giga Information will talk about Y2K testing, SAIC will discuss network and telecom issues, and Renaissance Worldwide will present strategies and solutions for Y2K.

## Y2K Odds and Ends

- In an effort to provide "comprehensive information about Microsoft products and how they are affected by the Year 2000," Microsoft has released their new Product Guide, available on their Web site, [www.microsoft.com/year2000](http://www.microsoft.com/year2000). For each product, the Product Guide states if it is compliant or not. The Product Guide also provides dependencies, describes how the product handles dates, identifies some common pitfalls in using dates, and gives testing recommendations. The Product Guide indicates that Word 97 (v. 8) and 98 (Mac); Excel 5.0, 95 (v. 7), 97 (v. 8) and 98 (Mac); and Access 95 (v. 7) and 97 (v. 8) are compliant. Windows '95, Windows 3.11, Windows NT 4.0, and Word 95 (v. 7) and Word (v. 6) are compliant with minor issues. Word for MS-DOS (v. 5.0) and Access 2.0 are not compliant.
- In February representatives of **Banyan Corporation** met with ITD and several of the Y2K PMO team to review Banyan's Year 2000 strategy and the status of their products. Banyan stated that they will deliver Year 2000 compliant versions of all core products by mid 1998. Vines 8.5, the compliant version, was released at the end of March. BeyondMail is scheduled for the end of the second quarter of calendar 1998. Vines 5.54 (20) can be upgraded directly to Vines 8.5, i.e., users will not have to install interim versions up through 8.5. Client machines will support Win 3.x, Win '95, Win NT, and Mac operating systems. StreetTalk 7.x will also upgrade directly to 8.5 without requiring interim upgrades. For more information, see Banyan's new website at [www.banyan.com](http://www.banyan.com).

## Reminder

According to Year 2000 best practices and the Y2K PMO's recommended schedule, agencies with mission critical systems should have documented test plans and be in the testing phase now in order to complete testing by January 1, 1999. For essential systems, agencies should be documenting their test plans and expecting to complete testing by May 1999. Concurrently, agencies at risk of meeting critical dates for completing their Year 2000 conversion efforts, should be beginning contingency planning efforts. ♦



# ONLINE GOVERNMENT/ ELECTRONIC COMMERCE

## Online Government or Electronic Commerce? - What's the Difference?

While the term Electronic Commerce has gained wide acceptance in both the private and public sectors, it is often interpreted to refer to those electronic transactions that involve the exchange of money for products or services. In the public sector, Electronic Data Interchange (EDI) used in the procurement of goods and services and Electronic Benefits Transfer (EBT) used to distribute benefits to recipients are often used as examples of "electronic commerce." For governments, however, online technologies open up the possibility of a wider range of transactions that involve valuable exchanges that are not necessarily commercial in nature. Some examples include:

- Applying for and issuing licenses and permits
- Applying for and issuing grants
- Accepting filings such as legal documents and taxes
- Online democracy such as constituent services, public comment and voting

The term Online Government encompasses a broader definition which goes beyond the traditional "electronic commerce" to include any multilateral transaction over networks which represents authentic and binding commitments of value. While the two terms will most likely continue to be used interchangeably, this brief explanation should help alleviate any confusion that may exist.

## Online Government Strategic Planning Initiative - Security and Authentication

One of the critical issues being addressed as part of the Online Government Strategic Planning Initiative is the role of Security and Authentication solutions. ITD has engaged the services of GTE Internetworking Professional Services to identify the full spectrum of available solutions and to develop a framework to

guide agencies in choosing the solution(s) that best fit their needs. GTEI is also expected to make recommendations regarding a statewide policy for the use of digital certificates for information security and authentication purposes.

Various state agencies are in different stages of design and development of applications that use the Internet and Web-based technologies for conducting transactions. It is believed there is significant commonality in the security requirements of many agencies, and the opportunity exists for substantial cost savings and operational simplification. It is expected that the resulting plans will support current and future secure Internet applications through the development of a common approach and building the requisite infrastructure. GTEI will first conduct a series of focus groups with representative agencies to assess requirements. After a series of discussions with ITD and agency staff, a final recommendation report will be submitted. GTEI staff will present their recommendations at the Massachusetts Online Government Summit to be held in June. They will also conduct a series of small group tutorials at that event.

## Coming Events

*June 11-12, 1998*

Massachusetts Online Government Summit, The Center for Executive Education at Babson College, Wellesley, MA

*September 9-10, 1998*

Government Technology Executive Leadership Forum on Electronic Commerce, Tremont Hotel, Boston, MA

## On the Internet

*Online Government in Massachusetts, a Report of the Massachusetts Online Government Task Force*, is available for online viewing and downloading at <http://www.magnet.state.ma.us/itd/onlinegv/index.htm>. ♦



# Absorption of County Government Continues

The transition of county government functions into state agencies continues with the merger of Hampden and Worcester counties into the Commonwealth on July 1, 1998. Once again, the county sheriffs' offices will become state agencies and the county registry of deeds offices will be transferred to the administration of the Secretary of State's office.

As with the previous integration of Franklin and Middlesex counties last summer, there are a number of technical issues that need to be addressed to make the transition successful. All of the technical issues must be addressed by the July 1 deadline. However, the level of technical needs in each of the counties varies and, unlike Franklin County, these counties already have more equipment in place and will not require wholesale upgrades. (See the county government stories in the spring and summer 1997 ITD Bulletins.) For example, Middlesex County had an infrastructure in place to support MMARS and PMIS. While Middlesex County's conversion plan involved mostly connecting their network to the state's WAN for e-mail and internet access, there were additional upgrades that needed to be made in the other county offices.

ITD's Strategic Planning Group senior consultant Bob McInnis said that the other counties will require some upgrades to allow them to communicate with the state through e-mail, the internet and MMARS. "We're not starting from scratch like we did in Franklin County," he said. But Mr. McInnis added that there was a considerable amount of analysis, design and coordination that needed to occur to make the transition a smooth one.

Hampden County Sheriff's Office IT Manager Fred Bliss said that his department is already fairly sophisticated and operating in a Windows NT environment. "Our facility opened in 1992, and we did a lot of things right from a technology point of view," he said. Nonetheless, Mr. Bliss said that some planned projects will be made easier by the transition to the Commonwealth. He said that the sheriff's department will be able to communicate with other state and law enforcement agencies and the Criminal History Systems Board through the Public Safety intranet. There are also plans to establish a web site for the Sheriff's Department.

"Because security is an important issue with us we've always been pretty isolated and stayed away from internet access," said Mr. Bliss. But with the Hampden County Sheriff's Department firewall and policies being developed by his department on internet access, Mr. Bliss said that he sees the new areas of communication being opened up by the county absorption as an "excellent opportunity".

When this latest round is complete, four of the commonwealth's fourteen county Sheriff's Departments will have become state agencies. As the transfers continue, disparities in computer technology will be eliminated, allowing counties to share data and better serve their constituents. ♦

*"Our facility  
opened in  
1992, and we  
did a lot of  
things right  
from a  
technology  
point of view."*



# RESOURCES

## ***FY98 IT Readiness Program a.k.a. The Big Buy***

For the past four years the Office of the State Comptroller, together with the Budget Bureau and the Information Technology and Operational Services Divisions of the Executive Office for Administration and Finance, have coordinated an Information Technology bulk purchase for Commonwealth departments. The Big Buy is a centralized effort which pools together information technology equipment orders across state departments in order to obtain volume discounts from vendors. This year there will be some changes in the program. For the first time, Departments will have the choice of purchasing and/or term leasing equipment. In addition, the first priority for all Departments is to upgrade software and hardware where necessary, to ensure that local areas are Year 2000 compliant.

According to the vendors involved, last year's Big Buy was the largest volume pricing/purchase initiative undertaken to date in either the private or public sector. Final orders were received from 49 departments for a total of 1,450 PCs, 203 Notebooks, 131 Printers and 8 Servers. These orders add up to a total of \$3.7 million which represents more than \$1 million in savings over regular Commonwealth blanket contract prices.

This year, the IT Readiness Program team will strive to acquire faster systems at greater discounts. For more information about ordering in FY98 at Big Buy prices, see the IT Readiness Program web site <http://www.magnet.state.ma.us/itd/bigbuy>.

## ***Massachusetts General Laws on the Web***

In January of 1998, the Massachusetts General Laws (MGL) were made available on the Commonwealth's web site at <http://www.state.ma.us/legis/laws/mgl/>. Not only are the laws accessible by stepping hierarchically through a series of menus, or by entering the URL of a particular Chapter and Section

(instructions provided), but they can also be searched by key words (search syntax tips provided).

Ever since the Commonwealth had a web site, people have been eager to see the MGL published there. The Legislature maintains the laws' text using a mainframe application called TextDBMS. They have used this software since 1978, because of its ability to handle large volumes of text and its capacity for maintaining searchable databases. Jim Proctor of the Senate Clerk's Office figured out how to convert the proprietary markup used in the TextDBMS to Hyper Text MarkUp Language (HTML).

The Communications Bridge provides the link between the mainframe data base and the server used for staging material for the public web server. CommBridge (described in the Fall 1997 issue of the IT Bulletin) is a mechanism for communicating in a consistent and standardized manner between disparate applications on "incompatible" platforms. According to Sarah Bourne, Director of ITD's Internet Services Group, "The beauty of it is that it's automatic. When the Legislature's data base is shut down each night, that day's changes automatically get sent via CommBridge to the staging platform for uploading to the web server." The files -- including bill histories and member and committee directories, as well as the laws -- are transferred to the public web server. The search service, which makes the web version of the MGL so valuable, uses Microsoft's Index Server.

During February 1998, of the 2.4 million non-graphics page requests made to the Commonwealth's web server, 534 thousand of those requests (more than 20%) went to the Legislature's site. The MGL are set up on the web in 26 thousand files: this sounds unwieldy, but it actually facilitates citing references to very specific points of the law. Two to three hundred files are loaded to the General Court's web site every day, with changes being incorporated into the body of the MGL every five weeks. This popular addition to the Commonwealth's web offerings owes its existence primarily to Jim Proctor of the Senate Clerk's Office (see profile on page 3) carrying out the objectives of Senate President Thomas F. Birmingham and House Speaker Thomas M. Finneran, with lots of help from Sarah Bourne, Charlie Salisbury, Mark Heumann and John Tankevich of ITD.



# RESOURCES

## ***Data Center Mailing Services Save Money***

The ITD Mailing Services Center is a state-of-the-art mail processing facility. It provides mail processing services to state agencies as well as to Cities and Towns of the Commonwealth. It is located at the Massachusetts Information Technology Center (MITC) in Chelsea and provides efficient service with a fast turnaround to agencies.

The ITD Mailroom can:

- Process up to 75,000 pieces a day and coordinate all aspects of agencies' mailings.
- Burst, fold, insert, and apply postage using the latest mailroom technologies.
- Maintain agencies' postal accounts.
- Provide courier service in and out of Boston daily, and same-day service to the Post Office.

By utilizing the latest in mailroom technologies, the ITD Mailroom can help agencies save thousands of dollars a year. Even larger savings are available to customers using the Bar Code Sorting system. This machine can process up to 150,000 pieces a day and save up to 6.6 cents per piece of mail.

State agencies and Cities and Towns can use the Mailing Services Center without a competitive procurement and with payments processed through ITD's Chargeback System. For more information, contact Jack Shea at 617-660-4581 or at [Jack.Shea@state.ma.us](mailto:Jack.Shea@state.ma.us).

## ***Oracle Access to the Commonwealth's Information Warehouse***

Application development in the Commonwealth has fostered new demands for the provisioning and accessibility of information. This has been an ever-increasing area for attention by the Information Warehouse Group. In the past, as data was first made available in the Warehouse, desktop-PC users found new ways to improve reporting and decision-making.

Today, as the Warehouse continues to expand its scope, departments are integrating Warehouse data into their large-scale applications.

For instance, FamilyNet, an application developed at the Department of Social Services, is using the Information Warehouse to populate system tables in order to validate transaction data, such as object, program or vendor codes from MMARS. Currently, other agencies such as the Department of Transitional Assistance and the Department of Medical Assistance are investigating similar uses of the Warehouse.

For DSS, the product that makes the integration of data from the Warehouse possible is the Oracle Transparent Gateway for Microsoft SQL Server. The product allows queries executed against a Microsoft SQL Server database to return data to an Oracle database. In conjunction with a data retrieval tool, such as the Oracle Discoverer 2000, the Transparent Gateway allows for feasible data retrieval in a cross-platform environment.

The Information Warehouse is a 65-gigabyte database containing nightly updated transaction and reference data from MMARS, PCRS and PARIS. Currently the database resides in Microsoft SQL Server 6.5 on a Compaq 5000R Proliant server running on the Microsoft Windows NT 4.0 operating system. Today, the Warehouse meets the reporting and decision-support needs for over 1700 knowledge workers within Commonwealth departments.

To better service the needs of DSS and other Commonwealth departments interested in this product, the Information Technology Division's Database Group at the Massachusetts Information Technology Center (MITC) in Chelsea is maintaining a server for the Oracle Transparent Gateway. For more information on the Oracle Transparent Gateway, contact Domenic Musto at 617-660-4466 or [Dom.Musto@state.ma.us](mailto:Dom.Musto@state.ma.us). For more information on the Information Warehouse, contact Marissa Geller at 617-973-0707 or [Marissa.Geller@state.ma.us](mailto:Marissa.Geller@state.ma.us). ♦



## INFORMATION TECHNOLOGY DIVISION

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Boston, MA 02108

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The *Information Technology Bulletin* is a quarterly newsletter of ITD's Strategic Planning Group. One of SPG's tasks is to act as a clearinghouse for IT information. This publication furthers that goal. Please send correspondence to Managing Editor, Elaine Socha, the Information Technology Bulletin, Room 801, One Ashburton Place, Boston, MA 02108.

Voice: (617)973-0865  
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Email: Elaine.Socha@state.ma.us

This publication is also available on the Web at  
<http://www.magnet.state.ma.us/itd/bulletin/>

Next publication: Summer 1998

Leonard Adams  
UMass - W.E.B. DuBois Library  
Government Documents  
Amherst MA 01003



## A MESSAGE FROM THE CIO

David Lewis has joined the Information Technology Division as Deputy Director. Perhaps "re-joined" might be a better word, since David was a member of the Office of Management Information Systems (ITD's predecessor agency) prior to his most recent and distinguished tour of duty at the Registry of Motor Vehicles. I want to thank the RMV for giving him back to us!

He will have a pretty full plate as ITD balances workload on Year 2000 initiatives (both inside the agency, and on behalf of our customers); the new HR/CMS payroll and human resources system; the reintegration of Medicaid claims processing into the state's own mainframe computing environment; and various online government initiatives.

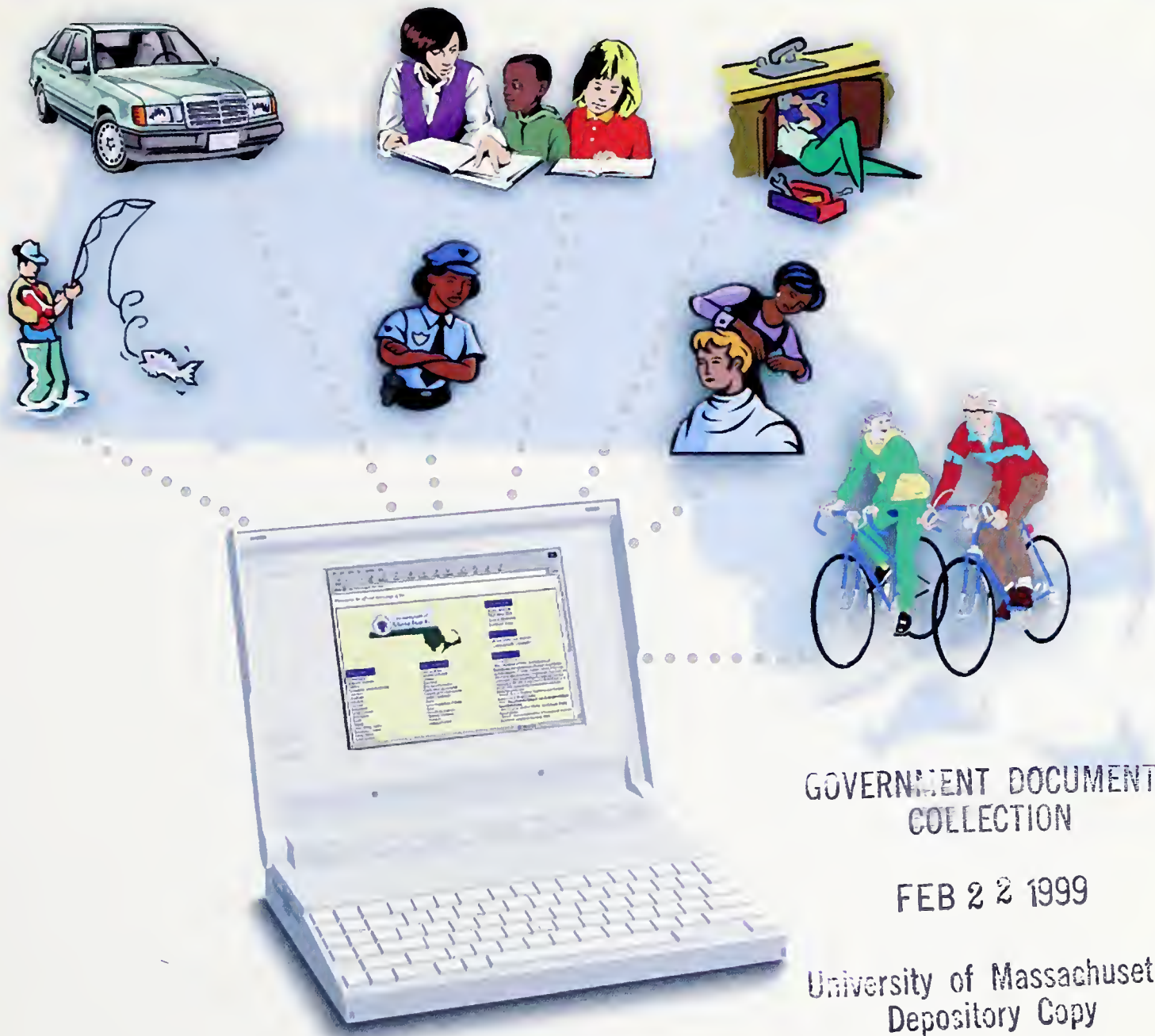
As you read this, staff at DMA and ITD are working around the clock to "insource" DMA's Medicaid claims processing applications to operate at Chelsea MITC data center. Sharon Wright of DMA and Ralph Ragucci of ITD are coordinating the initiative. Send pizza.

Congratulations are in order for certain VIPs and their teams: Vin Piccinni on another successful tax season -- as well as the COMETS child support implementation; Craig Burlingame on navigating FamilyNet in for a safe landing; Patricia Wada for a gorgeous high-level design effort on HR/CMS; and Marge MacEvitt for the exemplary Year 2000 assessment at DPH.

And don't forget the Online Government Strategic Planning meeting June 11-12. Be there or be square (capacity limited to 100).

T. Louis Gutierrez





GOVERNMENT DOCUMENTS  
COLLECTION

FEB 22 1999

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# Commonwealth Of Massachusetts Information Technology Annual Report

## Fiscal Year 1998

A Special Edition Of The Information Technology Bulletin

Volume 4, Number 3, Summer 1998





Photo by Jerry Shereda

# Commonwealth Of Massachusetts Information Technology Bulletin

Volume 4, Number 3, Summer 1998

## A Special Edition

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# MESSAGE FROM SECRETARY BAKER

*'Fundamental to human nature are the satisfactions that come from excellent performance and service to others.'*



## Preamble to the Constitution of the Commonwealth of Massachusetts:

The end of the institution, maintenance, and administration of government, is to secure the existence of the body politic, to protect it, and to furnish the individuals who compose it with the power of enjoying in safety and tranquillity their natural rights, and the blessings of life: and whenever these great objects are not obtained, the people have a right to alter the government, and to take measures necessary for their safety, prosperity and happiness....

Fundamental to large institutions is the transformative power of technology.

The maintenance and administration of this government — a Fortune 20 sized portfolio of "companies" serving over 6,000,000 citizens — is an endeavor eternally reliant on the performance and service of dedicated individuals. And these individuals increasingly enhance the impact of their service through technology.

This first annual Administration and Finance report on statewide technology expenditures and projects lays out a roadmap of significant technology-induced changes to government services in Fiscal Year 1998.

Always, we start first with the question of service to citizens: How has technology made state government easier to access, or more effective in its service?

We go further into the back offices to examine powerful new toolkits, highlighting systems that transform government programs, and enhance accountability.

And finally we focus in this year's report on the "Y2K" issue, which serves to remind us of human limitations, even in the possession of powerful tools.

Technology pursued for its own sake leads us astray. We must always return to first principles: the right of our citizens to enjoy in safety and tranquillity their natural rights, and the blessings of life. With this first principle as focus and bedrock, with an energetic aspiration towards excellence, and through intelligent application of new technology, we foster and sustain the commonwealth.

A handwritten signature in dark ink, appearing to read 'Charles D. Baker'.

Charles D. Baker,  
Secretary of Administration and Finance  
August 31, 1998



## A&F INTERNET APPLICATIONS



### Comm-PASS

*The Commonwealth Procurement Access and Solicitation System ([www.Comm-PASS.com](http://www.Comm-PASS.com)) is the state's Web site where Commonwealth Department solicitations are advertised on-line 24 hours a day, 7 days a week—with these advanced features:*

When composing a Request for Response (RFR), save hours of valuable staff time by using the enhanced Comm-PASS search function to look for the RFRs with similar content. The Search engine also allows Departments to check for Statewide Contracts, and provides all the necessary MMARS and pricing information for each contract. There is also a contact name, telephone number and E-mail address posted with every Statewide Contract.

If the item needed isn't already part of a Statewide Contract, check the Comm-PASS Business Registry to search by business category, or to find those offering a specific product or service.

#### Questions about **Comm-PASS**

can be directed to the  
**Comm-PASS Help Desk,**  
Monday through Friday,  
9:00 a.m. to 5:00 p.m.,  
at 617-727-6334 or toll-free at  
**1-888-MA-STATE**  
(1-888-627-8283) or E-mailed  
to [Comm-PASS@state.ma.us](mailto:Comm-PASS@state.ma.us).

## Commonwealth Employment Opportunities



Commonwealth of Massachusetts  
Executive Office for  
Administration and Finance  
Human Resources Division  
James J. Hartnett, Jr.  
Personnel Administrator  
One Ashburton Place, 2nd Floor  
Boston, MA 02108  
(617) 727-3777

*The Commonwealth of Massachusetts offers  
a wealth of career opportunities.  
Public Service offers unique, exciting  
challenges and the chance to enhance and  
enrich the lives of our citizens.*

The Commonwealth Employment Opportunities (CEO) Program is an internet-based, one-stop, up-to-date listing of state government employment opportunities. The CEO is a cooperative effort of the Information Technology Division, the Human Resources Division and Secretariat/Agency Human Resources and Affirmative Action Managers throughout the Executive Branch, marked a successful spring quarter.

In April, approximately 280 job postings were entered into the CEO; in May 270 positions were listed and in June, 210. This quarter's total of 760 job postings represent activities generated by 135 user agencies and 293 "official" users of the CEO system. The CEO is also proving to be very popular with the public. In April, the CEO site received 250,880 inquiries, in May 234,309 and in June, 239,851.

During the summer a series of focus groups was coordinated by the Human Resources Division, which will bring together Executive Branch managers, employees and other CEO customers. The groups will discuss system enhancements to be considered for the coming year. Detailed information on the focus group sessions will be sent out in August.

On an ongoing basis, we welcome any comments or suggestions on ways to improve the CEO system.



## **DIVISION OF REGISTRATION**

### **Working for Massachusetts Consumers... Serving Licensed Professionals**



One FY99 implementation will already have been completed by the time this Annual Report is published: the Division of Registration's web site at <http://www.state.ma.us/reg>. This web site provides both information and service. Along with easy access to data on the Division, its programs, and

each of the 32 boards of registration, consumers have the ability to locate a professional in their area, check license and disciplinary information on more than half a million professionals, and download helpful tips and forms. This will make it a lot easier for consumers to choose a licensed dentist or a chiropractor, a plumber or an electrician, a nurse or a real estate broker, through this interactive site.

The Division's administrative personnel, comprised of the executive directors and staff of the boards of registration, provide support and direction for the boards. They coordinate business processes, perform general planning and apply new approaches to testing, licensing and renewal.

*Continued from A&F Internet Applications*

## **Construction Reform**

A&F convened a task force to review existing agency practices with regard to public construction procurement and management. One of the task force's recommendations was to create a centralized Commonwealth construction web site to help simplify and explain complicated procedures. This site, now under construction, will include "how to" manuals for contractors, relevant forms, and construction related laws, regulations, etc. It will also provide centralized access to databases for contractors to obtain comprehensive project and bid information and for awarding authorities to share contractor information online. Other construction related pages include: The Highway Department at <http://www.state.ma.us/mhd> The Central Artery Project at <http://www.bigdig.com/home.htm> The Division of Capital Asset Management (DCAM, formerly DCPO) at <http://www.state.ma.us/dcpo> The Department of Housing and Community Development at <http://www.state.ma.us/dhcd>





## MASSACHUSETTS GENERAL LAWS ONLINE

*Ever since the Commonwealth has had a web site,  
people have been eager to see the  
Massachusetts General Laws (MGL) published there.*

In January of 1998, the MGL were made available at <http://www.magnet.state.ma.us/legis/laws/mgl/index.htm>. Not only are the laws accessible by stepping hierarchically through a series of menus, or by entering the URL of a particular Chapter and Section (instructions provided), but they can also be searched by key words (search syntax tips provided).

During February 1998, of the 2.4 million non-graphics page requests made to the Commonwealth's web server, 534 thousand of those requests (more than 20%) went to the Legislature's site. The MGL are set up on the web in 26 thousand files: this sounds unwieldy, but it actually facilitates citing references to very specific points of the law.

This popular addition to the Commonwealth's web offerings owes its existence primarily to Jim Proctor of the Senate Clerk's Office, with help from several areas within ITD (Network Services, Database Communications, Internet Services, and the CommBridge team).

The Legislature formerly maintained the laws' text in a mainframe application using Text DBMS, which had been chosen because it could create



output in a mark up language. Jim Proctor of the Senate Clerk's Office figured out how to get Text DBMS to produce output in Hyper Text Mark Up Language (HTML), the language used for most web publishing.

Initially the Commonwealth's web servers ran on the Unix operating system. However, the web version of the MGL was designed to run on Windows NT to facilitate searching, a known requirement for this application. Once ITD

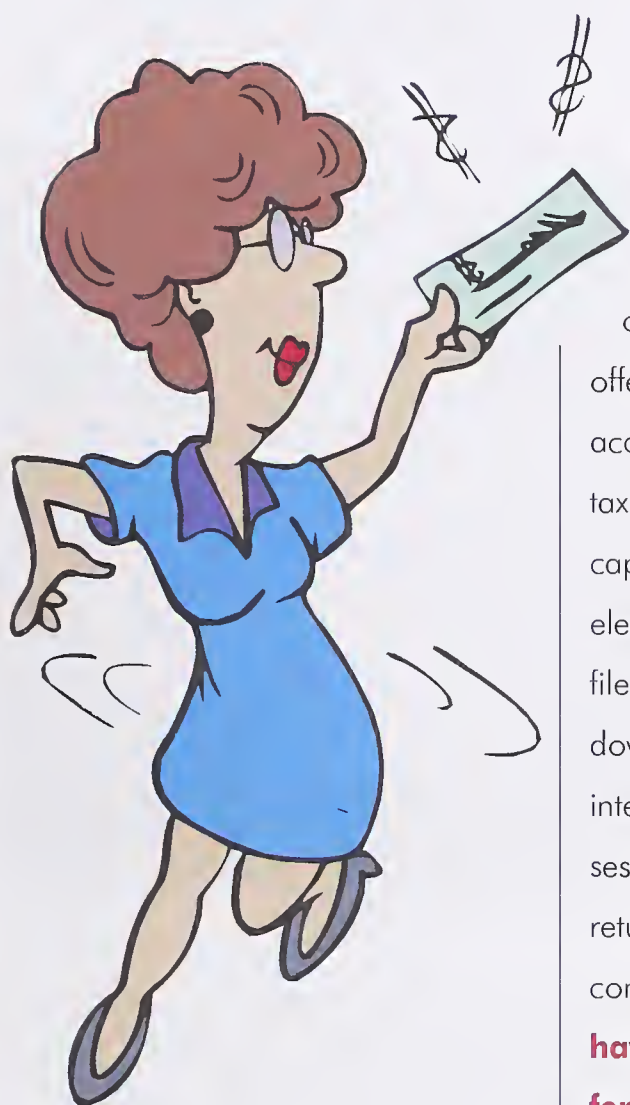
converted the web servers from Unix to NT, the way was clear for publishing the MGL in such a way that they could be searched.

The Communications Bridge provides the link between the mainframe data base and the server used for staging material for the public web server. CommBridge (see Online Tool Box story) is a mechanism for communicating in a consistent and standardized manner between disparate applications on "incompatible" platforms.



## TAX APPLICATIONS

*The Department of Revenue (DOR) continually strives to make technology work for the benefit of the state's taxpayers.*



File and Telefile programs. Three versions of the PC File program were offered on the website to accommodate as many taxpayers with varying PC capabilities to file electronically. Two of the PC file versions are available for download; the third is an interactive bulletin board session that will transmit a return via a modem-to-modem connection. **Taxpayers who have filed valid extensions for time to file income tax returns can still take advantage of these options to transmit their returns — through October 15, 1998 — to DOR.** To offer as many taxpayers as possible the benefits of faster more efficient filing, DOR opened these electronic filing methods to tax practitioners as well to file their

clients' tax returns this year.

In addition to offering more efficient means of filing returns, the Department of Revenue also used its web site to quickly distribute important information to taxpayers. Recent public interest in the Massachusetts Turnpike Fuels Excise Refund Program has spurred DOR to publicize this program via its web site. DOR posted to its web site a newly-created informational brochure explaining the program and related forms. News bites highlighting the new items were added to the home page to draw taxpayers' attention to the new online offerings. For ease of use, these news bites also include direct links to the showcased items.

During this past filing season, DOR used its website ([www.state.ma.us/dor](http://www.state.ma.us/dor)) as a medium to provide several electronic means of filing income tax returns to taxpayers. At the end of the 1998 filing season, more than 430,000 income tax returns were accepted via DOR's PC



## MAGNET USAGE STATISTICS

*Currently hosting web sites for over ninety state agencies, the Commonwealth's web server at <http://www.state.ma.us> continues to grow in popularity as an Internet destination.*

The state website was established in June 1995, receiving 62,000 hits, or file requests, in its first month. The server had 6.3 million hits for June 1998, only three years later. 18,772 new and replacement files were loaded in June, an indication of a useful, up-to-date web site. The most popular pages include:

Commonwealth Employment Opportunities at

<http://www.state.ma.us/hrd/ceo/>

The Massachusetts General Laws at

<http://www.state.ma.us/legis/laws/mgl/>

Home pages for the Registry of Motor Vehicles at

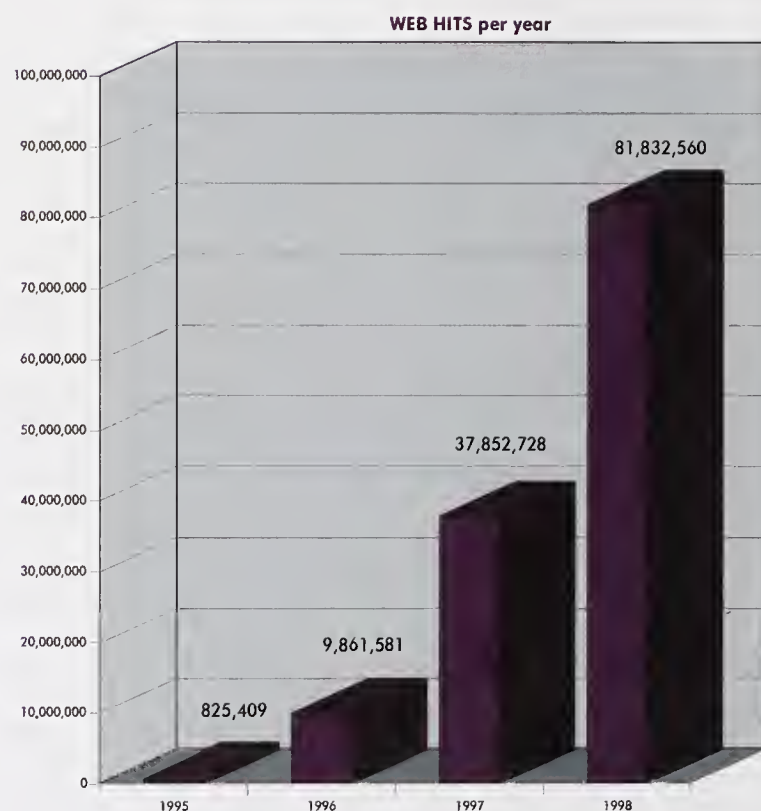
<http://www.state.ma.us/rmv/>

Department of Revenue at

<http://www.state.ma.us/dor/>

Department of Public Health at

<http://www.state.ma.us/dph/>



## What's In This Name?

**state.ma.us**

Only the state government of Massachusetts can have the domain state.ma.us. The US domain, a fairly new top level domain, is where federal government agencies, state government agencies, K12 schools, community colleges, technical/ vocational schools, and city and county government agencies are supposed to register.

NET, COM, and ORG domains are intended for the private sector. No identity proof is required to obtain a domain name in NET, COM, or ORG. For information on the US Domain, see

<http://www.isi.edu/in-notes/usdnr/usdom-overview.html>



## ONLINE GOVERNMENT SUMMIT

Photos by Jerry Sheredo



Louis Gutierrez Addresses The Group



Russ Gront, John Shontell and Charlie Anderson Discuss the Proceedings



Bill Kilmartin Discusses Electronic Commerce



Val Asbedian, Gabe Goglione and Claudia Boldman Enjoy the Reception



Gary Lambert Describes The Electronic Mall

On June 11th and 12th the Information Technology Division kicked off its strategic planning effort for Online Government in Massachusetts with a Summit attended by 90 key information technology and policy staff representing 35 state government entities. Among the objectives of the Summit were:

- to begin to formulate a shared vision for Online Government in Massachusetts
- to provide participants with a good understanding of where we stand currently in terms of agency projects and support services available
- to provide participants with a common understanding of some of the key issues involved, such as security and authentication, legal issues, and coordination of services that cut across organizational boundaries
- to engage participants in identifying areas that would benefit from statewide standards and coordination

- to build a sturdy foundation for online government projects, and
- to motivate participants to continue their input and participation in developing the Commonwealth's Strategic Plan for Online Government

Feedback from participants indicated that this type of forum is very worthwhile and informative. Participants appreciated the opportunity to exchange ideas with their colleagues and to contribute to the ongoing planning process. The Summit also served to put current Commonwealth efforts in context with the efforts of other states, the federal government and the private sector in the area of online government.

We are at the very beginning of a significant transformation in the way governments will interface with constituents, partners and each other. The next few years in Massachusetts Online Government are going to be a time of significant change,

turbulence and opportunity. ITD will continue to involve agencies in planning for the infrastructure and support mechanisms necessary to achieve the promise of Online Government.

The planning effort will initially concentrate on the areas of Electronic Payment Processing, Security, Authentication and Technical Infrastructure. It is anticipated that policies, standards, guidelines and new centralized services will result from this process. ITD is also collaborating with Government Technology in planning an Executive Leadership Forum on Online Government to be held in Boston on September 9 and 10, 1998. Also stay tuned for a Vendor Day focused on online government to be held some time in November. For more information regarding ITD's Online Government initiatives, please contact Claudia Boldman at (617) 973-0857 or Robert Hester at (617) 973-0797.

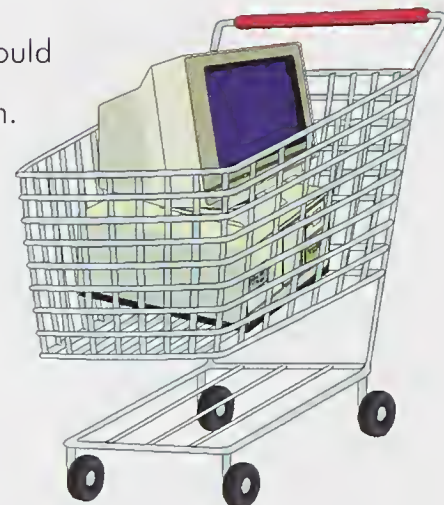


# FY98 IT READINESS PROGRAM

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It is somewhat ironic that the FY98 "Big Buy" Committee decided that this would be a good year to change the name of the "Big Buy" to the IT Readiness Program. For this year's Information Technology bulk purchase was truly a BIG BUY! Each year the volume of purchase has increased. However, in FY98, final orders were received from 65 departments for a total of 4,237 PCs, 349 notebooks, 174 printers, and 33 servers. These orders added up to \$8,414,886.75 with savings of \$2,103,722!

These numbers are greater than the FY96 and FY97 Big Buys combined.



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# COMMUNICATIONS BRIDGE

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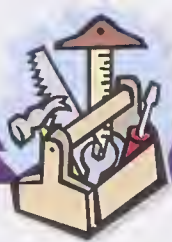
The Communications Bridge (CommBridge), built on IBM's message queuing product MQ Series, allows the Commonwealth's diverse applications to "talk" to each other in spite of differing platforms, protocols, and technologies. In FY98, some significant milestones were met:

- DTA is able to request wage information from the DOR and receive a response in a matter of hours by replacing a tape exchange that had previously taken as long as a week.
- The new DSS application, FamilyNet, creates financial documents, transmits them to MMARS and receives status information from MMARS that in turn updates the FamilyNet database, all without any human intervention.
- Data exchanged via CommBridge can now be encrypted, allowing for greater security of confidential information.
- Batch file transmissions done through CommBridge are now totally recoverable when problems occur, even in cases of network failures.

Additional projects that will utilize CommBridge are underway with the EOHHS, Office of Child Care Services, DPH, DMR, and DOR.

To learn more about CommBridge, attend the User Group meetings that will be held the last Friday of the month at 11:00, in room 1601, Ashburton Place, beginning September 25. Information will soon be available on the ITD website: <http://www.itd.state.ma.us/eab/CommBridge>





## FAMILY NET

*Changing The Way DSS Does Business*

On February 10, 1998, the Massachusetts Department of Social Services (DSS) turned on its \$50 million automation project called FamilyNet launching the largest public or private Oracle (type of software) application in the country. FamilyNet completely revolutionizes the way DSS performs virtually all of its core functions from case management and adoption to legal work and bill paying functions. All of these functions were previously time-consuming, paperbound processes.

In many realms of society, technology has become commonplace. In child welfare, however, it has been slow in coming. After much careful thought, Massachusetts realized the enormous potential technology could have on the ultimate goal of finding ways for social workers to spend more time with



families as opposed to steno pads and pens. The project was much more than automating case records. It was creating a whole new work environment, a new way of doing business – a total culture change. Under any circumstances, that is not easy, let alone in an organization with thousands of employees spread out over more than 30 different sites.

FamilyNet has provided unique advancements to DSS to further its work on behalf of children and families. This project represents the most significant technological advances to DSS in almost two decades, has been singled out as a national model for SACWIS funding and has brought child welfare light years ahead with regards to automation.



## NEW CHILD SUPPORT SYSTEM ON-LINE

*The Department of Revenue switched on its powerful new child support computer system, COMETS (Commonwealth of Massachusetts Enforcement Tracking System), in December 1997. The new system is expected to generate millions of dollars in increased child support for families across the commonwealth.*

COMETS is a windows based system designed to improve DOR's ability to locate absent parents, establish paternity and enforce child support orders. Here are just a few of the many benefits offered by the new system:

- enhanced interfaces and data matches with computer systems in Massachusetts and across the country (including the national directory of newly hired employees) boosting interstate enforcement;
- 24-hour toll-free access to detailed case information — such as recent payments, court appointments, and the status of administrative reviews — on their child support case;
- greater consistency in enforcement as caseworkers have on-line access to policies, forms and case histories and the system prompts the worker with the next task;
- assessment of interest and penalty charges on past due child support payments to deter parents from building large debts and encourage parents to pay the child support bill first.

All states were required by the federal government to develop new computer systems for the collection and disbursement of child support to meet new federal guidelines.

## WANTED

IN MASSACHUSETTS FOR FAILURE TO PAY CHILD SUPPORT



**DANIEL M. MADRID**  
OWES: \$116,182



**DARYL R. HENRY**  
OWES: \$34,614



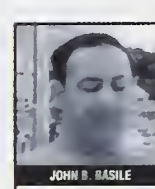
**JOHN B. BASILE**  
OWES: \$25,140



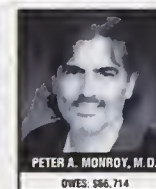
**STEVEN E. ARENHUS**  
OWES: \$71,708



**PAUL G. BICKFORD**  
OWES: \$32,475



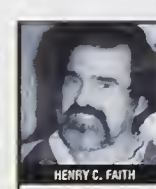
**HENRY C. FAITH**  
OWES: \$24,511



**PETER A. MONROY, M.D.**  
OWES: \$66,714



**JOSEPH FISCHELLI**  
OWES: \$31,660



**HENRY C. FAITH**  
OWES: \$24,511



**FRANCIS E. VAN NESS**  
OWES: \$57,850



**CHRISTOPHER RILEY**  
OWES: \$27,130

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Revenue**  
Child Support  
Enforcement Division





# AG'S & PUBLIC CHARITIES AUTOMATION

*The Massachusetts Attorney General's Office reached a significant technological milestone in FY98 with the successful migration of its case management system from a Wang to network environment.*

Work on the project began in June 1997 when the AG's office hired IBM to conduct a requirements analysis and identify an off-the-shelf case management system that best met the AG's needs. The prototype that was developed utilizes Lotus Notes as the platform with customized databases. The AG's Office now has one customized case management system that optimizes the similarities while understanding the differences between its divisions.

### Benefits of the new case management system are:

- A single system with a consistent look and feel so each division can track its individual data;
- More productive desktops through integration of e-mail, word processing and calendar;
- The ability to easily make changes or upgrades, and reduced maintenance costs; and,
- A single system that tracks the full span of a matter from investigation to litigation, and appeal through compliance.

The Office of the Attorney General also received funding in FY98 to automate the Public Charities Division which is responsible for tracking, monitoring and reporting on four years of information on approximately 34,000 charities currently registered. This project will provide the Public Charities Division with a Notes database and imaging system to assist the division in its oversight function and fee collection process. The

objectives of this project are to increase revenues, decrease physical filing space, better allocate resources, increase the office's capability to report information to other state agencies and the public, as well as increase the level of access for charity related documents and records to the public. The implementation of this new system began in June. Future updates to the system will include a web-enabled version of the data for public access.





# HR/CMS



*We apply automation to advance every other critical function of state government from tax administration to licensing. It's time to update systems to support our workforce.*

The new Human Resources/Compensation Management System, HR/CMS, is a partnership across all branches of state government and the Commonwealth's largest technology deployment since MMARS. It replaces our legacy systems, brings state decision-makers access to data now isolated in separate systems, and provides enhanced functionality for state human resources and payroll employees.

During the last fiscal year the executive committee under the chairmanship of James J. Hartnett, Jr., Personnel Administrator, oversaw the selection of Andersen Consulting as project partner and the appointment of Patricia Wada as project director.

Department representatives who perform human resources and payroll functions joined the project team in Joint Application Design sessions, which compared the off-the-shelf software to existing Commonwealth business processes. The result: minimal modifications will be made to the software. There will be some significant changes in business practice — chief among them, a biweekly payroll.

From a technical perspective the Commonwealth's ability to design a robust and manageable enterprise-wide technical architecture is critical to the success of HR/CMS. The Commonwealth has successfully implemented client/server-based projects

such as the Information Warehouse and CEO. Yet HR/CMS, due primarily to its size, scope and transactional nature, represents our most ambitious and far-reaching application of these technologies and tools.

The HR/CMS Desktop requirements are:

- Pentium 200
- 32mb RAM (minimum)
- Windows 95/98 or Windows NT 4.0 or later
- TCP/IP connectivity to MAGNet
- 100mb free hard drive space

Any PC which conforms to Big Buy 1997/1998 specifications will support HR/CMS as long as it has TCP/IP connectivity to MAGNet.





## HRD'S VIDEOCONFERENCING CENTER

*Information Technologies, including video, audio, computer and print extended delivery of information and education to "anytime, anywhere" learning.*

Traveling to a central location to attend courses will no longer be necessary; instead, participants can take courses and learn new skills closer to where they live and work via distance learning methodologies.

Following the example of many leading universities and colleges who now offer courses using this technology, HRD is opening (planned for the fall of 1998) its Video Conference Center on the 10th floor of One Ashburton Place, as well as several regional centers located in community colleges throughout Massachusetts. The state-of-the-art Video Conference Center is already providing a key linkage to Andersen Consulting's Solution Center in Atlanta during the Detailed Design and Build phases of the HR/CMS project which began in July. In addition, beginning with a



Photo by Jerry Sheredo

range of change management activities such as business process changes, project updates and ongoing support, the Video Conference Center (including regional facilities) will play a vital role in the statewide implementation of HR/CMS.

Future plans include using the regional centers to provide state and municipal employees the opportunity to attend job-competency-based courses and continuing education classes closer to work and/or home. The centers will also allow HRD to supplement its current

training programs by tapping into the rich educational resources of the Commonwealth's Higher Education system. The ImageTel videoconferencing equipment installed at HRD is compatible with other videoconferencing equipment in use elsewhere and will be compatible with high definition TV, when available. The HRD Center has a 4 foot by 7 foot screen and several cameras for conferences, instruction and documents. A VCR is also integrated with the system for both recording and playing.



# MITI YEAR 1 RETROSPECTIVE

*Advances for interactive video and powerful state education network*

It's been a year of rapid growth for the Massachusetts Information Turnpike Initiative (MITI) network:

### Fall '97

All UMass Campuses broadcast Interactive Video Courses with new MPEG-2 high quality interactive digital video.

### Fall '97

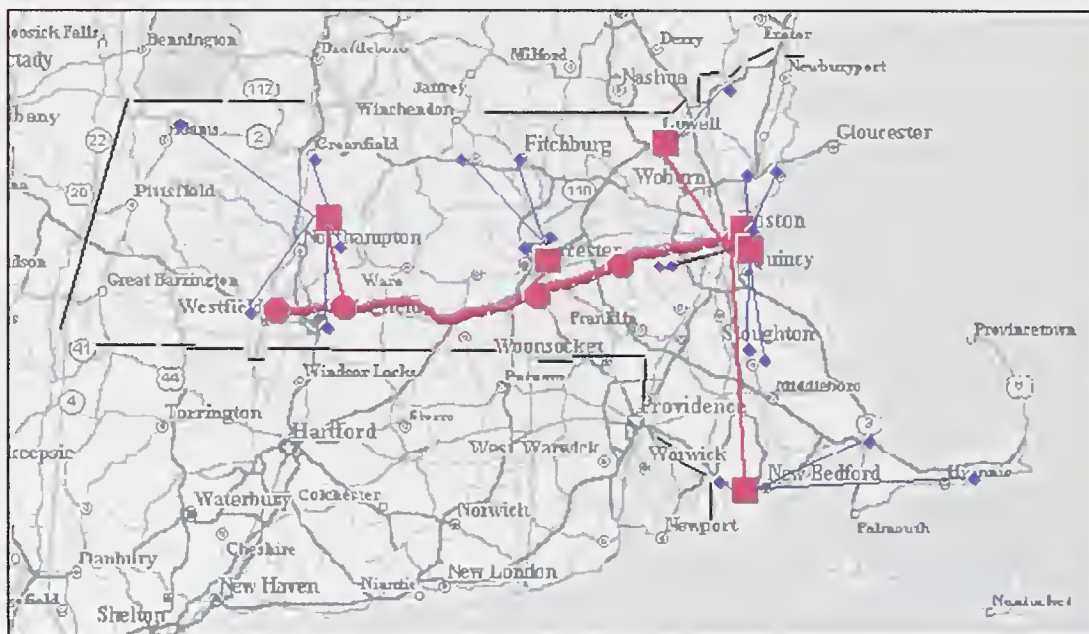
UMass provides a high-speed Internet Service for State and Community Colleges.

### Winter '97

MITI provides new low-cost solutions for high-quality H.320/H.323 Video Conferencing to overcome limits with ISDN.

### Spring '98

UMass/MITI and DOE join National Guard and State Agencies to Propose State-wide K-12 and Community Network to be completed by the end of the year 2000.



The Massachusetts Information Turnpike

- = UMass campuses
- = Mass Pike Connections
- ◆ = State and Community Colleges

## On the MITI horizon for this year:

- Supporting UMass Outreach in Education and Research
- Linking IT Bond-funded UMass Distance Learning Centers
- Extending network distribution for interactive video, data, and Internet access to K-12 and State Agencies.





## AUDITORS OFFICE AUTOMATION

---

*The Office of the State Auditor's A. Joseph DeNucci is using IT Bond II funds to rework the process in which audit information is collected, analyzed, and disseminated.*

Previously, the OSA relied exclusively on an antiquated Wang VS for word processing and database applications. The computer hardware inventory consisted of Wang dumb terminals augmented by a few dozen microcomputers, only a small number of which were Pentium class, and several notebook computers of the 486/33 class. The lack of updated computers and software prevented the OSA from taking advantage of newer technology in its audit work.

Since the release of IT Bond II funds, OSA has completed Phase I of the project, which included installation of seven LANs, deployment of Pentium desktops and notebooks, and training for OSA personnel. OSA staff members are now in direct communication with their administrative center and regional sites; all OSA employees have access to email; and field auditors have access to the Information Warehouse and other external resources.

Phase II of the project is now underway. The focus is on the design of an audit process that will take advantage of the newly-installed technology. This phase includes migration of data from the Wang VS, the design of a database and applications that will provide information needed for audit scheduling and tracking, as well as administrative and personnel systems, the creation of audit workpapers and templates, and workflow procedures that will move information along. Over the next 12 to 18 months, OSA will be developing and implementing new audit programs and procedures that capitalize on the advances in technology.



## ITD'S YEAR 2000 STATUS

During FY98, Information Technology Division (ITD) addressed the Year 2000 problem across all divisions. The Communications Services Bureau (CSB) is responsible for MAGNet, the state's wide area data communications network. CSB has completed an inventory of MAGNet network objects, is in the process of determining the Year 2000 compliance status for MAGNet systems, and has completed high priority Y2K compliance projects. CSB has contracted with Bell Atlantic Network Integration to support their Y2K efforts.

The Enterprise Applications Bureau (EAB) is making progress on remediation of a number of statewide applications. Many of the applications are in testing now, such as CAPS, PCRS, and the Information Warehouse. The remaining applications are in the last stages of the remediation phase.

The Data Center in Chelsea has a two-fold Y2K problem: they have to ensure their own compliance as well as providing Y2K support for their customers. Currently, the Data Center itself is mostly compliant. Some product upgrades, however, are still outstanding. In order to provide Y2K support to their customers, the Data Center is establishing Y2K data simulation and data aging tools that will be available in September 1998, and a Y2K test environment that is scheduled to be operational in December 1998.

## FY98 YEAR 2000 HIGHLIGHTS

ITD's Year 2000 Program Management Office (Y2K PMO) recently published results of its April-June 1998 interviews with 169 agencies to assess the status of Year 2000 remediation in the Commonwealth. The PMO assigns status ratings based on various criteria, with the heaviest weight given to the progress of an Agency's mission critical and essential systems remediation. The rating system highlights agencies as "red" if 1 or more mission critical/essential



systems are scheduled for deployment after January 31, 1999/May 31, 1999 respectively; agencies with potential problems meeting the dates are yellow; and agencies with systems scheduled for deployment well in advance of PMO dates, "green".

The PMO collected information on 261 mission critical systems and 192 essential systems identified in 169 agencies. As can be seen in the chart, 110 of the 169 agencies are rated green.

On July 31, 1998, Louis Gutierrez, CIO for the Commonwealth, published new Year 2000 Compliance and Validation Standards for all Executive Branch agencies. The standards include requirements for completion of the "Agency Statement of Year 2000 Compliance", contingency planning and testing, and are available on ITD's Y2K web site, [www.state.ma.us/y2k](http://www.state.ma.us/y2k).

Throughout FY98 the PMO provided a variety of resources, such as:

- Monthly User Group Meetings and quarterly Year 2000 days to foster the exchange of information;
- Workshops: Planning a Year 2000 Project and Testing the PC BIOS;
- Year 2000 Compliance and Validation Standards

### Templates:

- Sample Year 2000 Project Plan, and sample Year 2000 Test Plan that includes a comprehensive list of dates to test,
- Vendor Compliance Request Letter and Spreadsheets to request and record Y2K compliance status of COTS,
- Letter to Landlords to request information on facility Y2K compliance, and
- Interface management packet, including overview and sample forms for tracking interfaces;

### Documents:

- Year 2000 Compliance, Meeting the Challenge, 1<sup>st</sup> and 2<sup>nd</sup> Editions, which include a list of Y2K web sites, suggested contract language, and a list of blanket consultants who have signed the Commonwealth's Y2K warranty agreement,
- White Papers: PC BIOS and the Year 2000, and LANs, WANs, and the Year 2000
- ITD Data Center Agency Y2K Test Support Manual, with responsibilities for the agencies developing and maintaining systems at the Data Center.

Most of the publications are also available on ITD's Year 2000 web site at <http://www.state.ma.us/y2k>.



## FY98 IT SPENDING

### IT BOND II FY98 PRELIMINARY EXPENDITURES

Project Name	FY 1998 Expenditures (as of 8/3/98)
BEACON	5,807,905
Electronic Commerce	4,143,039
MAGNet	2,729,145
Electronic Benefits Transfer	2,611,436
Matching Grants To Public Schools	2,492,802
SAO-Automation Of Audit Preparation	2,003,686
HR/CMS	1,764,175
DOR-Expanding Massachusetts Storage Capacities	1,656,901
ITD-Strategic Planning	1,548,444
EHS-Systems Integration Project	1,486,538
DOC-Inmate Record Imaging & Archiving	1,331,966
Massachusetts Information Turnpike Initiative (MITI)	1,166,499
DMH-Office Automation	1,004,558
DA Database Development	870,957
AGO-Public Charities Division Automation	870,103
Mystic Valley Development Corporation	837,345
AGO-Systems Migration And Office Automation	781,997
SCA-Integrated License And Document Management System	755,477
DOR-Backup Disaster Recovery Computer System	600,000
CPC-Office Automation	544,359
DOR-Imaging And Workflow Technologies	516,813
CHS-Firearms Licesing And Imaging (FLIP)	510,538
FWE-Statewide Point-of-sale Outdoor Recreation Transaction (SPORT)	501,914
DOR-Client/Server Network	364,364
SEC-System Migration & Office Automation	233,549
ITD-MMIS Software	255,227
OCD-Client Fiscal Management System	230,405
Springfield Technical Community College	210,300
Senate Automation Projects	200,243
SEA-Berkshire Telecom Initiative	150,000
State Police Information Network (SPIN)	149,985
FamilyNet	149,940
ITD-PARS	135,931
ELD-Home Care Management Information Systems (HOMIS)	121,414
MCDI-ITD-Educational & Technical Programming Technologies	104,630
CAD-Community Housing Opportunity Enforcement System	98,435
CJT-Law Enforcement Technical Training Centers	68,119
SCA-Division Of Banking Public Access Pilot	63,710
EOL-Workforce Development Network	43,825
SEA-Office Automation	29,568
DOR-Interactive Voice/Data Systems	10,150
IGO-Office Automation	4,547
Total IT Bond II FY1998 Preliminary Expenditures	39,160,939

## FY98 IT SPENDING

### PRELIMINARY FY98 IT SPENDING

Executive or Constitutional Office or Branch	Gross Operating Expenditures	Gross Capital Expenditures	Grand Total
Health & Human Services	\$64,007,150	\$26,476,771	\$90,483,921
Administration & Finance	\$32,676,689	\$19,021,886	\$51,698,575
Public Safety	\$21,457,711	\$11,456,545	\$32,914,257
Higher Education	\$13,117,732	\$3,010,247	\$16,127,979
Treasurer & Receiver General	\$13,324,363	\$573,547	\$13,897,910
Judiciary	\$7,696,632	\$4,912,933	\$12,609,565
Environmental Affairs	\$3,433,523	\$6,013,101	\$9,446,623
Department Of Education	\$4,253,289	\$3,338,807	\$7,592,096
Transportation & Construction	\$1,288,325	\$3,812,743	\$5,101,069
District Attorney	\$3,325,333	\$870,957	\$4,196,290
Secretary of State	\$3,777,359	\$283,908	\$4,061,267
Consumer Affairs	\$1,684,628	\$1,283,095	\$2,967,723
Attorney General	\$878,981	\$1,675,110	\$2,554,091
Office of State Comptroller	\$108,894	\$2,157,929	\$2,266,823
Joint Legislative Expenditure	\$1,927,473	\$213,769	\$2,141,242
State Auditor	\$115,619	\$2,003,899	\$2,119,518
Labor	\$1,144,113	\$96,994	\$1,241,107
Sheriff's Departments	\$935,685		\$935,685
Economic Affairs	\$750,315	\$166,086	\$916,400
All Other	\$987,271	\$461,483	\$1,448,754
<b>Grand Total</b>	<b>\$176,891,084</b>	<b>\$87,829,810</b>	<b>\$264,720,893</b>

#### Notes:

Budget Fiscal Year 1998 Expenditures as of August 26, 1998 including the following object codes:  
 E07, E08: Phone expenditures and chargeback  
 E09: Software and licenses  
 E10: Data processing chargeback  
 H03: Contracted IT professionals(including Medicaid processing system)  
 E11, J08, K01: IT cabling equipment and supplies  
 L01, L21: IT equipment lease-purchase or rental-lease  
 L41: IT equipment maintenance and repair

#### Does Not Include:

Expenditures from trust or federal accounts, or net effect of federal reimbursements  
 Salaries for State technical staff





**Frederick A. Laskey**  
New Secretary of Administration and Finance

A major FY99 initiative of the Office of Consumer Affairs is the Consolidated Licensing and Tracking System which is currently being built using Internet based tools to enable users to access the system using standard web browsers. The Core Licensing and Tracking model will be implemented by September 1998. A limited Y2K compliant version will be operational at the Division of

Insurance in February 1999. They will then install the complete Consolidated Licensing and Tracking System at the Board of Registration in Medicine in May 1999, and install the complete system at the Division of Insurance in August 1999. The Consolidated Licensing and Tracking System will be installed in all OCA licensing agencies in subsequent Phases of the Project.

The Office of the State Comptroller's MASSfinance (formerly MMARSWeb) will include CommonCents, an Internet resource for answers to frequently asked financial questions; VendorWeb, an extranet service that allows vendors access to MMARS information and functionality; and ManagerMMARS, an intranet executive information system driven by MMARS and the Information Warehouse. CommonCents, VendorWeb, and ManagerMMARS are all

slated for release in the first quarter of FY1999.

The Environmental agencies' major initiatives for FY'99 include the Executive Office of Environmental Affairs providing access to the library of Geographic Information System (GIS) data through a browser interface at the beginning of August. This includes scanned USGS basemap, digital orthophoto images, resource mapping, open space and recreational information, etc.

The Department of Fisheries, Wildlife and Environmental Law Enforcement will have selected a contractor to finish the design and implementation of the SPORT (Statewide Point-of-sale Outdoor Recreation Transaction) system. This E-Commerce Application will allow hunters, fishermen, recreational lobster fishermen, boaters, ATV and snow-mobilers to obtain and renew their licenses at 500 agents throughout the state and over the World Wide Web. Full implementation and rollout is expected in 1999, with a prototype available in the fall of 1998.

The Department of Environmental Protection will launch a first-in-the-nation online certification for 10,000 companies in the Commonwealth. This Environmental Results Program (ERP), will allow companies to

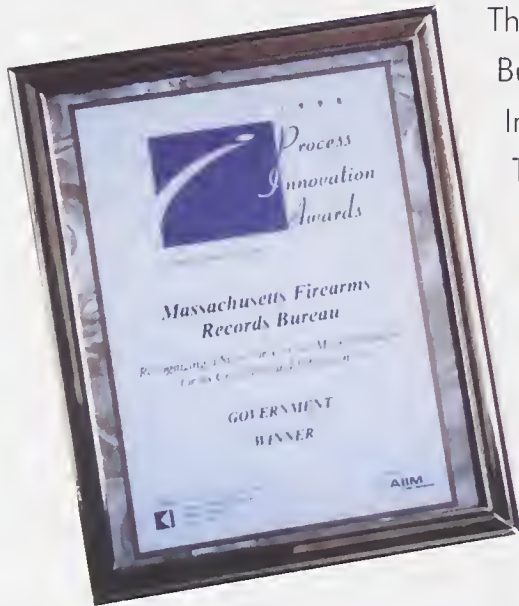
*continued next page*

During FY'99, some major milestones will occur among the agencies of **Health and Human Services**.

One such milestone will be the "in-sourcing" of the DMA applications — transferring their operations from service bureau contracts to the ITD Data Center at Chelsea. It is anticipated that this application, which pays approximately \$4 billion in claims for medical services, will be operated at a substantial savings.

DPH's Early Intervention system (EI) uses the Web to validate claims and receive invoices from the approximately 45 contracted providers of EI services, with vendors uploading claims data from their proprietary billing systems to a web server. FY99 plans include submission of the invoice via the state's CommBridge service rather than email and expansion of web-based processing to vendors who provide other DPH-funded services.

## FLIP WINS NATIONAL AWARDS



The Executive Office of Public Safety and the Firearms Records Bureau won the prestigious Vision Award at the Association for Information and Image Management (AIIM) Conference in May. They also won the Vertical Market Solution Award in the Government category. The Vision Award honors the information technology initiative with the greatest potential to transform a business or social process. FLIP (Firearms Licensing and Imaging Project) was singled out from more than 60 nominations by a panel of independent judges. The Executive Office of Public Safety applied technology to reorganize the Firearms

Records Bureau after moving it to the Criminal History Systems Board, and revolutionized gun record information systems through an electronic imaging system providing instantaneous data retrieval to help law enforcement agencies. This application solves a long-standing problem of records irretrievably stored in boxes with a system able to search and retrieve more than 725,000 gun sale records instantly. The system protects society against those who should not possess weapons.



Photos by Jerry Shereda

*continued from Coming Attractions*

electronically certify their compliance with all state environmental regulations, replacing over 16,000 permits.

The Department of Environmental Management will enhance their web site to provide easy and quick access to information about DEM programs and services through an Online Visitor Center, with an internal component of facility based information. DEM is also establishing a state of the art campground reservation system for state

park customers: Campground Access and Management Program (CAMP) for Massachusetts. CAMP Massachusetts will allow the public to make a campsite reservation via a toll free number (1-877-ICAMPMA) or via DEM's On-line Visitors Center web site.

In the Higher Education arena, the University of Massachusetts will be completing their MITI project to connect all their campuses to each other and to the Internet

and to enable distance learning and library access between campuses. MITI will also serve the state and community colleges, which are upgrading their infrastructure to support cross-campus distance learning and library access. Eventually MITI will also enable Internet access for the K-12 school system and for other state agencies.



## MESSAGE FROM THE CIO

In this first annual retrospective on information technology activity in the Commonwealth, ITD's goal is to communicate broadly the results of key state technology investments in the past fiscal year, and to preview Fiscal 1999 activities.

Information technology investments, successfully executed, enhance efficiency and/or effectiveness: efficiency from providing more service at same or better cost; effectiveness from providing different, better, and more relevant services to Massachusetts citizens.

The explosive growth of the internet helps us on both fronts. It is a very economical way to reach out to citizens and provide information on government services available to them, and also to provide citizens with the ability to execute required government transactions directly online.

It also provides a means whereby the myriad activities and authorities of state government can be presented as an integrated "whole", through one state web site home page, to Massachusetts citizens. The challenge will be to ask ourselves how to make this "whole" more and more useful to our citizens and businesses.

The official state web site expects to receive 82 million page hits this year. This activity represents citizens of Massachusetts and people around the world accessing Commonwealth resources 7 days a week, 24 hours a day.

Behind this online face of state government, hundreds of staff work hard to operate and enhance the backbone systems that keep the engine of representative government at the state level working — accounting for all expenditures, sustaining payroll, disbursing benefits, exchanging vital public safety information, enforcing child support laws, managing service caseloads, licensing individuals and businesses, and on and on — again every operating hour of every day. Over the next fiscal year, ensuring that all of these systems are ready to successfully process the century change — January 1, 2000 and beyond — will continue to be a key priority.

Finally, the state has embarked on the implementation of a new payroll and human resources system to replace the aging, inflexible, and error-prone collection of pay systems currently in place. This will be an enterprise-wide initiative that will summon from all of us an energetic push to successful completion in early 2000. Departments across state government must get ready in FY1999, with appropriate PCs in their human resource groups and staff training on Windows 95/98/or NT.

I would like to dedicate this FY98 Annual Report to outgoing Secretary of Administration and Finance Charles D. Baker. Secretary Baker is someone who has firmly believed that technology can play a significant role in improving government operations and citizen service.

Incoming Secretary Frederick A. Laskey, formerly Deputy Commissioner of the Department of Revenue, is also someone who knows, from direct experience, how technology can be successfully applied to improve large-scale government operations, and the importance of aggressive work on Year 2000 remediation and testing.

It is my hope that you have enjoyed reading this report, that you share in the pride that comes from your own role in enhancing state technology, and that you continue helping us to imagine unimaginable service possibilities in this swiftly changing world.

Louis Gutierrez  
Chief Information Officer  
August 31, 1998



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# INFORMATION TECHNOLOGY

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## BULLETIN

Vol. 4 No. 4

Fall 1998

Executive Office For Administration & Finance  
Information Technology Division

### District Attorneys Develop New Case Management System



Michael J. Sullivan  
District Attorney, Plymouth County

The ability to track a criminal case from arrest, through prosecution and incarceration has always been an important component in law enforcement, especially for the Commonwealth's District Attorneys. There are eleven elected District Attorneys representing the Commonwealth's thirteen counties and they are primarily

responsible for the prosecution of all criminal cases within the Commonwealth. "Information technology is now vital to our ability to track cases and we are making important upgrades to our systems to assist the Commonwealth's District Attorneys," said Michael Sullivan, Plymouth County District Attorney and President of the Massachusetts District Attorneys Association (MDAA).

Currently, the District Attorneys' offices use a Wang mini-computer, COBOL-based Case Tracking system known as PROMIS. This antiquated system was installed in the late 1980's and does not satisfy the needs of most of the District Attorneys' offices. It is difficult to extract meaningful statistical data from PROMIS and there is no integration capability with other agencies outside of the District Attorneys' organization. Equally important, PROMIS

is not Year 2000 (Y2K) compliant and cannot be brought into compliance. "It was clear that a new system was needed for a number of different but very compelling reasons," said DA Sullivan.

As a new system was being proposed, DA Sullivan said it was important that there be coordination between all of the District Attorney's offices across the state. MDAA is the prosecutor's professional organization, acting as the central coordinator and funding source for all IT, training and resource improvement needs in the District Attorneys' organization. The MDAA is able to achieve economies of scale in procurement of hardware and software and equipment maintenance agreements. This allows product standardization throughout the entire organization.

The Massachusetts District Attorneys received funding in IT Bond II to develop and deploy a new Case Management

System (CMS) to replace the current PROMIS system. After the competitive vendor selection process, IBM was chosen as the consultant to develop the new system in early 1998. The new CMS utilizes Lotus Domino Internet web browser technology running behind a firewall at the MDAA office in Boston. This makes the District Attorneys' new CMS a private, secure intranet. The technology

was chosen for a number of reasons. First, the DAs have an older installed base of 1,400+ pre-Pentium PC's that are not capable of running traditional Client Server based duplications. Secondly, this "thin-client" approach allows more centralized administration and maintenance and translates into less trips for the IT

staffs in the offices to the individuals' PC's. Finally, the new CMS is forward-looking technology that leverages the Commonwealth's investment into the next century.

*... the new CMS is  
forward-looking  
technology that  
leverages the  
Commonwealth's  
investment into the  
next century.*

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Continued on page 2



# IT BOND II UPDATES

## *IT Bond II Brings Upgrades to Office of Inspector General*



In explaining the recent IT Bond II upgrades in the Office of the Inspector General (OIG), Don Ahern, the First Assistant Inspector General for Management stated, "Our upgrades may seem generic and plain vanilla to some people, but the improvements have been very important and have had a great impact on our office."

The OIG performs management reviews of state, county and municipal agencies and independent authorities, and conducts criminal and civil investigations. The Office also has a special unit devoted to monitoring the Central Artery/Third Harbor Tunnel Project and providing extensive technical assistance to project officials on contracting issues. The OIG staff assist public officials with implementing statutory requirements and prudent procurement practices, and investigates bid protests. The OIG also produces public reports, policy statements, instructional manuals, letters, and a quarterly local procurement newsletter that is distributed to approximately 3,000 public and private entities. In addition, the OIG has been directed by the Legislature to review and comment on dozens of real property transactions, public building projects, economic development initiatives and other state activities. Last year the Office established the Massachusetts Certified

Public Purchasing Official (MCPPO) program.

With all of this activity, basic improvements were needed for some very compelling reasons. Prior to the recent IT Bond II enhancement, the network server in the OIG was last upgraded in 1992. The PCs were networked using 8-bit Arcnet technology which had been in place since 1986, and only 13 of the 36 PCs in the OIG met Commonwealth standards. Although office staff performs frequent field work, the OIG had no electronic resources for use in the field. Even basic desktop publishing and document reproduction capabilities were severely limited, impeding staff efficiency and production.

To remedy this situation, the OIG utilized IT Bond II to undertake a number of upgrades, including: replacing the file server with a Pentium machine, replacing the operating system with Microsoft NT Server 4.0, replacing the cabling system, and upgrading the Office PCs, software and printers. Laptop computers, a CD-ROM tower, as well as a scanner and other imaging technology, were also purchased.

All of this was needed because technological problems were making it hard to meet the OIG's mandate. Increasing productivity and efficiency without compromising the security of the Office's data was the major consideration in making

the upgrades. With the upgrades now in place, the OIG staff has been able to increase efficiency and help others do so as well by providing better access to the OIG information.

Prior to January 1998, the OIG did not have a presence on the Web. Now other agencies and citizens are able to access a vast array of information at <http://www.mognet.state.ma.us/ig/ighome.htm>. This includes manuals for procurement officials, a recommended code of conduct, executive summaries of past reports, all the OIG reports going back to 1997, and newsletters. The upgrades have also allowed the OIG to create an internal PDF library, and to conduct legal research from the desktop. "Now our lawyers can quickly find what they are looking for and print only what they need," Mr. Ahern also pointed out that the MCPPO program has been very successful, with high marks from purchasing officials. "We couldn't have done all the texts, research, presentation materials, registrations, and other administrative tasks, as well as we have without the IT Bond II upgrades." He also points out that the upgrades were all done with off-the-shelf equipment and software, and are Y2K compliant. All of this adds up to cost savings, increased efficiency and less paperwork. Another IT Bond II success story — even if it is not glamorous, as Mr. Ahern said.

Continued from page 1

The construction of the new CMS is a person-based, event driven system. Cases are linked together by participants in the case (Defendants, Victims, Witnesses, Prosecutors, etc.) rather than simply by case number. The event-driven design organizes in-court and out-of-court events, allowing notification to District Attorney staffs of pending or past due events or deadlines. The event design model is dynamic and can be tailored by the individual offices without the intervention of a technical programmer.

The intuitive web browser interface will allow a complete view of all facets of the life of a criminal prosecution in the Commonwealth (District Court, Superior Court, Appeals, etc.). There will be integrated querying and reporting capabilities as well as the automatic production of various notifications and letters.

MDAA is currently entering the beta testing phase that will take place in three of the eleven District Attorneys offices.

The three test districts are a cross section of the Massachusetts District Attorneys organization; one large urban office, a mid-sized urban office and a small rural office. After the completion of beta testing in mid-December, any further customization for the remaining districts will be incorporated into the design, with roll-out, data conversion and training beginning in early 1999. The new CMS will be rolled out and in place by early summer 1999.

"Once the beta test is complete, we look forward to having the entire system in place by the middle of 1999," said DA Sullivan. "Coordination among agencies is increasingly important in law enforcement and this new system will help us reach that goal," he concluded.



# IT BOND II UPDATES

## *Project Helps MCAD Automate Reporting*



The Expanded Community Housing Opportunity Enforcement system (ECHOES) is one of many IT Bond II projects that will pay dividends in both time and cost savings. Project ECHOES was designed to help the Massachusetts Commission Against Discrimination (MCAD) automate the processing of complaints filed in local jurisdictions and report those complaints to the appropriate federal agency.

MCAD's mission is to ensure equality of opportunity by enforcing the Commonwealth's anti-discrimination laws, chapters 151B & 272, through the resolution of complaints of discrimination in the areas of employment, housing, public accommodations, services, credit and education. The Commission reviews and advises Governor's Cabinet Offices, pursuant to the requirements of Executive Order 227, concerning the policy and practices of the state's affirmative action mandates in employment, housing, construction contract compliance and minority and women business enterprises.

The Commission works to fulfill its mission through educating the public on issues concerning discrimination based upon race, color, national origin, national ancestry, creed, sex, sexual orientation, age, disability, and criminal records. In addition to these protected classes the Commission is mandated to educate the public on housing issues concerning marital status, military/veteran status, persons with children and public assistance. The Commission also initiates

research activities and legal suits which may advance the civil rights of people in the Commonwealth.

MCAD has offices in Boston and Springfield and coordinates with other state agency offices in Worcester and New Bedford. MCAD also has two federal counterparts, the Department of Housing and Urban Development and the Equal Employment Opportunity Commission. Because these agencies do not have investigative staff in Massachusetts, the work is done by MCAD staff and is partially reimbursed by the federal government. Thus, it is important that the automated processing system not only increase efficiency but that it creates accurate records for reporting purposes to ensure proper funding from the federal government.

The ECHOES project was initially funded by the federal office of Housing and Urban Development to exclusively handle housing complaints and has been expanded to process all discrimination complaints filed with MCAD. It includes the redesign of the existing database application and downloading data from the ITD mainframe to a network file server on the Wide Area Network. The WAN will provide links to the Boston and Springfield offices and the compliance centers. The network link will provide fax, e-mail, file transfer and video conferencing capabilities to improve communication and complaint processing times. The system will also allow MCAD to have real-time data exchange with the federal

government rather than the twice weekly snap shots of data now being provided.

According to MCAD MIS Director Franklin Young, the number of investigative cases has doubled from approximately 2,500 to 5,000 while staff levels have decreased over the past three years. "It was important for us to move from a paper and pencil office with secretaries typing everything into a more streamlined process," he said. MCAD has been moving to upgrade its servers and recently replaced approximately seventy old 486 workstations with new Pentium machines. With these initial improvements, Mr. Young said that investigators' productivity has more than doubled. MCAD also helped the cause by moving from an agency mainframe to a LAN, allowing all reporting to be done within the system.

The new project will take that a step further by giving constituents the ability to dial up and enter a complaint from their home computers. "It will also be in sync with the federal system," said Mr. Young. The bottom line result will be faster processing times, less paperwork, better coordination and importantly, an increase in federal revenues through better case tracking.



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*The system will also allow MCAD to have real-time data exchange with the federal government rather than the twice weekly snap shots of data now being provided.*

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## Environmental Protection Grant Awarded Electronically



On August 19, 1998, the Environmental Protection Agency (EPA) Region I in Boston successfully awarded its first paperless electronic grant to the Massachusetts Department of Environmental Protection (MADEP). The award was transacted as part of the Partnership 2000 (P2000) Pilot Program being developed and tested cooperatively by EPA and MADEP. The application for funding and the award of the \$85,000 grant to assist the MADEP to perform environmental analyses were totally transacted electronically using the P2000 software.

When Stephen Perkins, the Assistant Regional Administrator for EPA Region I, "signed" the assistance agreement to MADEP in August, he approved the award action electronically through the P2000 software installed on his desktop computer. The entire grant process under P2000 was transacted without using any paper and replaced a process that could have required up to 300 sheets of paper to award the same grant. In this particular pilot case, the entire time for the processing of this award from the State's application to the EPA's official signature was 2 working days compared to a normal grant cycle of between 30 and 60 days.

EPA Region I and MADEP are working cooperatively with other pilot states and EPA headquarters in Washington, D.C. to

design, develop and apply electronic commerce to EPA financial assistance programs. P2000 is a system utilizing Lotus Notes that will allow users to electronically:

- 1) access EPA guidance documents and funding targets;
- 2) apply for EPA grant funding;
- 3) negotiate grant work plans (or PPA's);
- 4) award EPA grant funds; and
- 5) manage EPA grants awards.

P2000 is the nucleus of EPA's efforts to automate the entire grants management process which will also include post-award management and closeouts and grant and environmental reporting requirements.

Pilot states were given the opportunity to adopt or tie into the EPA's system which manages the flow of a document through an agency. According to an overview provided by Deborah Quinn, MADEP's Chief Information Officer, MADEP opted to directly connect to the EPA Lotus Notes server via an internet connection furnished by ITD, using a Lotus Notes client installed directly on the desktop of a MADEP project participant. This allows MADEP staff access to the EPA Region I server in real time to follow the document through the edits and approvals of the application process. Ron Maribett, Municipal Assistance Chief for the Division of Municipal Services in MADEP's Bureau of Resource Protection said that this access provided by EPA saves substantial time in the grant process and demonstrates "an unparalleled level of cooperation between the states and EPA."

Mr. Maribett, who has been involved with the project since its inception over two years ago, credits its success to this interagency cooperation and to a number of individuals from those agencies such as Steve Travis and Bowo Wovezwo from MADEP and Bill Nuzzo and Jone Ephremides from EPA.

Over the next several months, EPA and MADEP intend to use P2000 for the application and award of several other environmental program grants including the FY99 Performance Partnership Grant (PPG). Four other states [New York, Delaware, Texas, and Arizona and EPA Regions 2,3,6, 9] are also pilot testing the P2000 system for grant awards. After the pilot tests are completed this fall, it is expected that P2000 will be available to other states and tribal governments for grant applications and awards. The Environmental Council of the States (ECOS) fall meeting marked the completion of the "pilot" phase of the P2000 project. The results of the P2000 pilot project were presented in October at the annual meeting of the ECOS in Idaho. Plans are now being developed to make the P2000 system available to other regions and their grant customers.

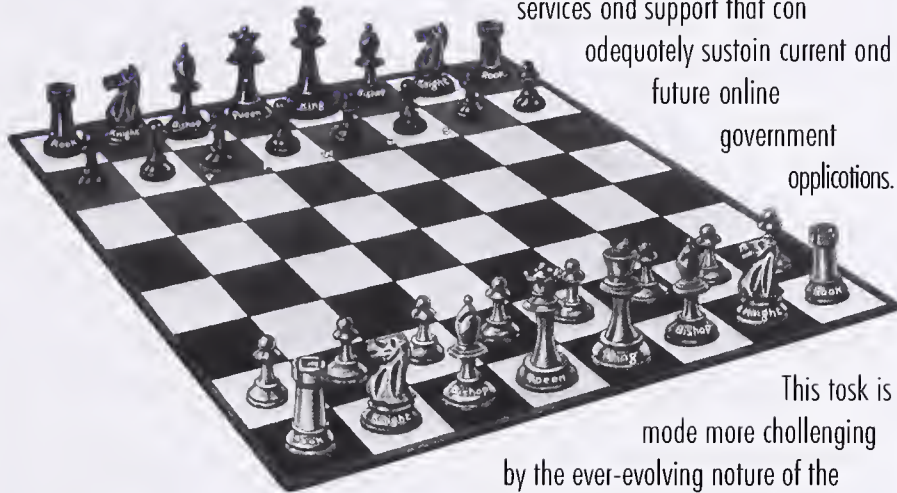
For further information about the project, contact: Ron Maribett (617-556-1127) or Joe Pulero (617-292-5533) at MADEP; or Bill Nuzzo (617-565-348) at EPA Region I or Jone Ephremides (202-260-3897) at EPA Headquarters.



# Online Government

## Strategic Directions

ITD is continuing its Online Government strategic planning efforts with the goal of building the enterprise infrastructure, services and support that can adequately sustain current and future online government applications.



This task is made more challenging by the ever-evolving nature of the Internet and supporting technologies. In many areas, such as Internet procurement or security, standards are still evolving making it difficult to give definitive guidance in these areas.

It is important, however, that agencies be informed about ITD's current thinking concerning issues that have enterprise-wide impact and that they bring their experiences to bear in the development of guidelines. The ITD Online Government Steering Group has developed a document format, *Strategic Directions*, to capture the collective thinking regarding issues areas of primary importance to Online Government. *Strategic Directions* drafts will be widely distributed for comment before they are published on the ITD Intranet site at <http://www.itd.state.ma.us/>.

The first two *Strategic Directions* documents have as their focus Hostnames and the Commonwealth Internet Domain Name Service (see related story below) and Commonwealth Public Access Architecture. The Steering Group is also working on a multi-year Online

Government Roadmap to capture the various activities and projects across ITD units that are contributing to building the infrastructure needed to support Online Government projects. The Roadmap, which will be continually evolving, will also be available on the ITD Intranet site. Please forward any comments to Claudio Boldmon at [Claudio.Boldmon@state.ma.us](mailto:Claudio.Boldmon@state.ma.us).

## What's In A Name?

When a citizen accesses a site on the Internet to obtain important information from a state agency, how do they know the site legitimately belongs to that agency and, further, that the "agency" is a legitimate state government entity? Is there a consistent identifier that denotes an entity as part of the Commonwealth of Massachusetts? The answers to these questions are crucial in helping to create public trust for state government information and transactions on the Internet.

Internet naming conventions have been designed to provide some categorization for the millions of sites that populate the network. The US domain is a fairly new top level domain used for the registration of federal government agencies, state government agencies, K-12 schools, community colleges, technical/vocational schools, and city and county government agencies. The NET, COM, and ORG domains are intended for the private sector.

These naming conventions help users to more easily locate particular sites. For example, any state's web site can be found at <state.xx.us>.

Within the US top-level domain, Massachusetts government entities are registered as part of <state.ma.us>. ITD manages this domain on behalf of the Commonwealth. New site names within <state.ma.us> can only be approved and registered by the designated Commonwealth contact (an ITD employee). This process serves to legitimize a state government site. In contrast, anyone with the money to pay for a name registration can do so under the NET, COM, and ORG domains as no identity proof is required. Please refer to the *Strategic Directions* document Hostnames and the Commonwealth Internet Domain Name Service for more detailed guidance regarding the request and approval process for host names within the Commonwealth.

# Who's Doing What Regarding:

## Data Center Tools

Two new Year 2000 testing tools for the mainframe are now available at ITD's Data Center in Chelsea: Plotinum Technology's date simulation tool, TransCentury Date Simulator, and their date aging tool, TransCentury File Age. The date simulator tool, used successfully so far by many agencies, allows users to specify any date as the system date. Date Simulator is easy to use, allows more than one user at a time using different fictitious dates, and requires no changes to JCL or the system. File Age allows users to 'age' data in their files by specifying the number of days to add to or subtract from every date in a database. The tool works directly with the database: i.e., it unloads and reloads data or updates in place. Plotinum conducted its first half-day training session on File Age in October. Additional sessions may be scheduled if needed. For more information, contact Joe Sorno at the Data Center at 617-660-4414.

## Outreach Update

In the life cycle of Year 2000 remediation, the focus is now on small businesses and local governments. Many of these organizations may just be starting their assessment and remediation and are in need of help, especially of the 'lessons learned' variety from organizations that are well on their way. Many state agencies are involved in outreach programs to their constituents and their regulated communities. ITD's Y2K Program Management Office (Y2K PMO) is also actively involved in outreach

to various organizations across the state. Some examples of agency outreach efforts include:

**Department of Telecommunications and Energy:** Sponsors technical workshops for municipalities and utility companies.

**Department of Education:** Identified all the administrative software packages in use by all the school districts in the state. Plans to disseminate compliance information.

**Division of Banks:** Includes Y2K compliance questions in annual examinations. With the FDIC, examines banks and credit unions on Y2K compliance status quarterly.

**Division of Insurance:** Surveyed Commonwealth-based insurers and engaged an independent consultant to audit each domestic insurer for Y2K compliance.

**Department of Revenue:** Publishes Y2K articles and reminders in every issue of *City & Town* and maintains a web page devoted to local government Y2K issues. Has mandated that, in order to have a FY99 tax rate set, communities must submit a report from their CFO on the municipality's Y2K compliance status.

**Department of Housing and Community Development:** Works with the local Housing Authorities across the state to raise Y2K awareness and monitor compliance. Discussed Y2K issues with the major housing software vendors in the Commonwealth.

**Massachusetts Highway Department:** Meets regularly with regional planning groups to address Y2K issues, especially as they relate to traffic signals across the Commonwealth.

**Department of Environmental Protection:** Issued a policy statement to their regulated community that Y2K is not an acceptable justification for non-compliance with DEP requirements. Carried this message to trade associations, work groups and service centers.

State agencies are strongly encouraged to work with their constituents at the local level in achieving Y2K compliance. The success of the Commonwealth in transitioning to the 21<sup>st</sup> century depends not only upon the State agencies' preparedness, but also on cities, towns, and small businesses. The health and safety of our citizens and our continued economic success depend upon everyone.

## Reminder

According to Year 2000 best practices and the Y2K PMO's recommended schedule, agencies' mission critical systems should be fully remediated and back in production by January 31, 1999. For essential systems, agencies should plan to complete remediation and testing by May 31, 1999. Agencies that are unable to meet these dates should be developing contingency plans.



# THE YEAR 2000

## Compliance and Validation Standards



In August 1998, the Commonwealth's CIO, issued Year 2000 Compliance and Validation Standards for all Executive Branch agencies. Agencies outside the Executive Branch are encouraged to use these standards to indicate to the CIO their current status and risk mitigation efforts. A copy of the Year 2000 Compliance and Validation Standards is available at the Massachusetts Y2K web site at [www.stote.mo.us/y2k](http://www.stote.mo.us/y2k).

The standards include a mandate for agencies to develop and maintain Year 2000 project documentation appropriate to the size, scope, and risks of their respective projects. Required project documentation includes:

- "Agency Statement of Year 2000 Compliance Status" to be completed/updated quarterly.
- Contingency plans for any mission critical or essential system that has been designated by the PMO as RED (having high risk) for more than 2 consecutive quarters.
- Business continuity plans from Commonwealth-critical agencies to ensure rapid recovery from internal or external Year 2000 failures that cause a disruption of mission critical agency services. A list of Commonwealth-critical agencies will be published by the CIO no later than February 15, 1999.

The new standards also require agencies to complete future date testing for each mission critical system. At a minimum, dates to be tested shall include September 9, 1999; January 1, 2000; February 29, 2000; and December 31, 2000.

The new standards additionally require that Commonwealth-critical agencies must either contract for Independent Verification and Validation (IV&V) of their most critical systems or provide a letter signed by the agency commissioner indicating how the objectives of this review have already been met. To help agencies, the Operational Services Division has developed a special IV&V blanket services contract.

## Non-IT Devices

The PMO and several agencies recently participated in a teleconference on non-IT devices conducted by Gigo Information Group, Inc. and led by Dove Holl, an expert on non-IT and the Year 2000. Two important concepts came out of the teleconference:

Because non-IT is so unique from organization to organization, there are no industry sector standard practices for these devices. However, there are common Critical Success Factors, including:

- Understanding and documenting the scope of the problem;
- Identifying levels of exposure to Year 2000;

- Developing project plans and providing project management;
- Developing contingency plans;
- Allocating appropriate resources; and most important: Providing Executive Support and Oversight!

During the open discussion, the issue of testing non-IT devices was raised by several participants who are concerned that warranties could potentially be voided by owner testing. Mr. Holl cited the Fair Use Clause, which states that a warranty will not be voided if the owner made reasonable and unsuccessful attempts to work with the vendor and thoroughly documented the attempts.

## Contingency Planning

Contingency planning should begin with identifying scenarios, especially worst case. Defining and understanding business processes and how they relate to each other is an important part of contingency planning. This is NOT an IT problem — so a contingency planning team should consist of management and business experts. The contingency planning team should anticipate the loss of one or more critical aspects of the business and determine the most cost-effective ways to continue activities in spite of outages. These plans must be well documented and thoroughly tested. One further note: a good contingency plan takes months to develop and test.

# GIS LEGISLATION PASSED



Users and supporters of Geographic Information Systems (GIS) technology across the state were eagerly awaiting the final version of the FY99 budget to see if the MassGIS program would receive a new mandate and operational funding from the state legislature. They were not disappointed. Section 63 of the budget amends the enabling legislation for the Executive Office of Environmental Affairs to establish a new office of geographic and environmental information, and the EOEI line item earmarks \$500k in EOEI's operating budget for this office.

The mission of the new office is to:

collect, consolidate, store and provide geographic and environmental information in order to improve stewardship of natural resources and the environment, promote economic development and guide land-use planning, risk assessment, emergency response and pollution control... [including] setting standards for the acquisition and management of geographical and environmental data by any agency, authority or other political subdivision of the Commonwealth.

The key word is *geographic* — GIS links digital mapping to new or existing databases, integrating information from a variety of sources in a graphical software environment to provide a new and valuable kind of decision support. At the monthly MGIC meetings sponsored by MassGIS and ITD, there are users of GIS from municipal government, environmental protection, transportation planning, public safety, historic preservation, human services and many other areas.

With the new operating money, EOEI intends to fund core staff at MassGIS who have been "03" contractors on a multi-year, bond-funded development project. The legislation gives this group broad responsibility to accomplish the following:

- Faster cooperative data development and data sharing;
- Expand its library of GIS information and provide access to it;
- Set standards for data documentation, models and formats;
- Provide technical support to towns and regional agencies;
- Establish regional service centers;
- Establish a statewide advisory board;
- Coordinate "scientific and technical expertise".

Like most IT programs, MassGIS will be trying to do a lot with a little. The emphasis is on data sharing — one key incentive is that the state can provide medium-scale basemap information, such as 1" = 400' digital orthophoto, to jump-start local and regional GIS implementations. Technical support includes software tools (a free GIS data viewer and Internet access) and distribution services (CD publishing). In setting standards, the main objective is to ensure GIS data portability. Ultimately, GIS data now in proprietary formats in a variety of software packages will reside in standard relational databases such as Oracle.

MassGIS is particularly seeking to engage local and regional entities in the effort to ensure the coordinated and efficient development of GIS across the state. Regional service centers and a statewide Advisory Board will ensure input from the broadest possible representation of GIS and environmental information users. The vision is one of a shared, statewide information resource providing the best available GIS data with technology that is scalable and affordable. See [www.state.ma.us/mgis](http://www.state.ma.us/mgis) for more details.



# SATELLITE Imagery



Civilian application of spy satellite technology is promising to revolutionize GIS with the scheduled launch in November of the Ikonos remote sensing platform by Space Imaging, the company that now distributes US Thematic Mapper and Indian satellite data. This is the first of a series of new commercial launches. It will provide one-meter panchromatic (grey-scale) and four-meter multispectral (color) images of any place in the US as often as every few

days — when the weather cooperates. Such high-resolution images show buildings, vehicles, even baselines on the ball field. MassGIS is exploring potential applications including updating natural resource and land use/land cover mapping at substantial savings. Multi-agency licensing is an option which the Commonwealth could negotiate.

Contact Philip Jahn at 617-727-5227 x330 for more information.

# PROJECT PROFILES

## *Integration Of Hampshire County Government*

The transition of county government functions into state agencies continues with the merger of Hampshire County into the Commonwealth on January 1, 1999. Once again, the county sheriff's office will become a state agency.

As with the previous integration of Franklin, Hampden, and Middlesex counties, there are a number of technical issues that need to be addressed to make the transition successful. The plan is to create an infrastructure to access MMARS and PMIS. The connection will also allow the sheriff's department to be able to communicate with other state and law enforcement agencies and the Criminal History Systems Board through the Public Safety intranet.

When this latest round is complete, four of the commonwealth's fourteen county Sheriff's Departments will have become state agencies. As the transfers continue, disparities in computer technology will be eliminated, allowing counties to share data and better serve their constituents.

## *Medicaid Insourcing*



The Medicaid Management Information System (MMIS) is a system required by the Federal Government in order to receive reimbursement for the Commonwealth's Mass Health Program. The MMIS system owner is the Division of Medical Assistance, which is part of the Executive Office of Health and Human Services. Medicaid expenditures total \$3.8 billion a year in Massachusetts, so effective operation of the MMIS is the key to receiving the \$1.9 billion federal reimbursement which is a major source of state revenue.

Prior to 1983, Medicaid claims payments were processed in a variety of settings including ITD's Westborough facility. After 1983, System Development Corporation (which later became UNISYS) built the MMIS to satisfy federal requirements and they continued to operate the system until September 19, 1998. Since September, the MMIS has been running at ITD's data center at the Massachusetts Information Technology Center (MITC) in Chelsea.

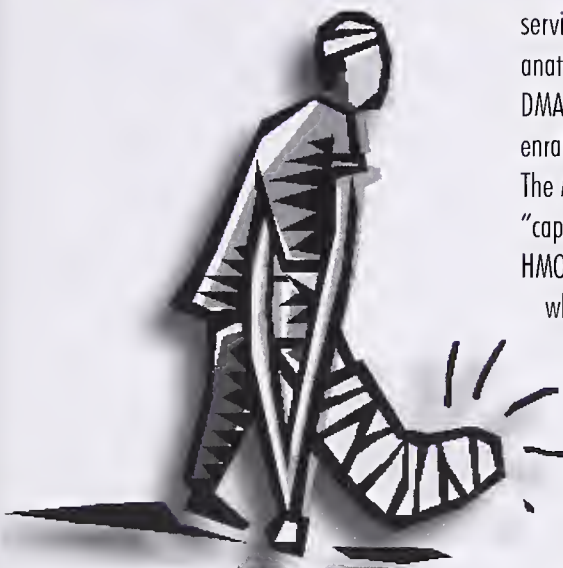
The MMIS is a huge system with several major components that allow the Mass Health program to provide medical insurance to approximately 850,000 Massachusetts citizens who would otherwise be uninsured. DMA's client population is primarily lower income citizens, the elderly and the disabled. Their customer base used to be families below the federal poverty level, but DMA is continually expanding the program to cover families with higher than poverty incomes who would otherwise be without insurance. In August 1998, DMA initiated a children's health expansion to provide family assistance for working people without insurance.

In addition to the member eligibility database, the MMIS holds data on 16 thousand active health care providers and all of the medical diagnosis and procedures data to adjudicate and pay 45 million claims each year. It has a systems interface for sending payment data through MMARS to the Treasury to generate the checks and electronic fund transfers. Bringing this operation in-house allows for more efficient processing, saving both time and money in the present and positions the Mass Health program for its next phase, electronic claims submission.

DMA provides several medical insurance plans for its members and pays for those plans in two different ways: fee for service reimbursement and "capitation". One large medical plan is the DMA-run Primary Care Clinician (PCC) plan with hundreds of thousands of members receiving service from doctors, pharmacies, hospitals, and other providers that is reimbursed through the MMIS fee-for-



# PROJECT PROFILES



service claims payment method. For another Managed Care Plan, the HMO Plan, DMA buys insurance from the HMO and enrolls members with those organizations. The MMIS issues a per person per month or "capitated" premium payment to those HMOs. There is also a Senior Care Plan which provides nursing home and community based services on a fee for service basis.

The MMIS system allows Division staff and its contractors to: enroll members into managed care plans; pay premiums or claims for services; maintain claims history data, and provides a powerful data analysis environment to study and evaluate all of the data that the system collects. The data is highly confidential, requiring a tightly secured environment which is one of the reasons ITD was chosen for the system's new home. To augment the existing security, ITD installed a firewall for MMIS because there are external entities that interact directly with the system.

## *Utilizing The Data Center*

There were many reasons for bringing MMIS in-house. The Commonwealth has made a huge investment in information technology with their move to CMOS machines at the MITC data center and with their plans for online government. For Year 2000 compliance, the data center has acquired the latest releases of a lot of system software (e.g., ADABAS, CICS, IMS). With these investments, chargeback prices at the data center have dropped. So the MITC data center offers the appropriate infrastructure at a reasonable price. While reengineering MMIS to bring it in-house, DMA avoided the higher expense for Year 2000 remediation in the former environment. While the system was being readied to run at ITD, all of its supporting system software environment was upgraded saving time and money.

There were huge inefficiencies having the MMIS run at a data center in California. The

Mass Health eligibility data already originates daily at ITD. With the MMIS now in the same data center as the eligibility data and the MMARS system, data does not have to travel back and forth across the country so that there is lower cost and increased efficiency. What tasks hours can now be done in seconds with the data communications source and target all in the same room. The onlines and reporting are faster, and the onlines can also start earlier and stay up longer because the overnight batch applications complete in less time. This is especially important for the on-line pharmacy system, POPS, a 24 by 7 operation that relies on the batch side of the MMIS to update its files nightly.

It is expected that running MMIS at MITC will save millions of dollars. There are actual savings in running the system in-house, and there was a huge cost avoidance in not having to reengineer the system for Year 2000 compliance and for growth needs under the UNISYS contract. And when the Commonwealth moves into online government with a "single face of government," MMIS will be part of that implementation with their claims submission.

MMIS is a very large integrated and constantly changing system with three million lines of codes, using ADABAS and Natural, as well as IMS and VSAM. ITD's data center also supports DB2, SQL Server, IDMS and Oracle. The data center has recently undergone a major change in its infrastructure, changing to smaller and faster machines with more capacity and introducing more flexible system software. See New Data Center Options and Opportunities in the Winter 1998 issue of the *IT Bulletin*, Volume 4, Number 1, for more information about major changes at the data center.

To support MMIS and other customer needs, the data center has recently installed three silos with 450 gigabytes of DASD. The data center has increased its print capabilities with a faster printer and enhanced its mail facility to handle high

volume mailing. The data center constantly monitors its capacity against demand to be proactive about providing sufficient computing power. The database administrators also keep the data bases in tune for efficient processing.

ITD made room at the Chelsea data center for 35 DMA staffers to accommodate MMIS system support needs. An advantage of housing applications at a major data center such as MITC is the capability of sharing resources across applications. A further advantage, along with being in the public sector, is housing applications at a major data center that is not trying to make a profit. ITD's data center already had most of the system software that the MMIS needed. In the case of the small number of required procurements, a Commonwealth license was purchased so that other customers could use the software as well as MMIS. This approach led to considerable cost avoidance versus continuing with UNISYS.

Insourcing the MMIS has been a huge, highly complex technical project and therefore a risky effort with high visibility. Because of going against the outsourcing trend, the project had to have solid cost justification. The success of the project demonstrates the resources that state government can bring to bear on behalf of the taxpayer. It further demonstrates the good business principles and good technical practice that can occur with cross-agency cooperation.

Next on tap for MMIS will be to begin the restructuring of claims processing to be ready for online government claims processing.



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## *A Message From The CIO*

I have stepped down as director of the Information Technology Division effective Friday, November 13, 1998. I have accepted an offer to join the U.S. Federal Reserve system, in the capacity of Deputy Director, Federal Reserve Information Technology, with a focus on information technology planning and standards, effective November 30. It has been an honor for me to serve this Commonwealth with you. I joined the Weld/Cellucci administration in the summer of 1992. Over the course of the past 6 years, I have had the great blessing to work alongside people whose competence, innovative spirit, and caring are unparalleled — first from the vantage point of the Fiscal Affairs Division, then at EOHHS, and most recently at the Information Technology Division.

The strength and dignity of our efforts are manifest in your consistent willingness to work together, selflessly, to advance the interests of our Commonwealth. I deeply appreciate the advances you have contributed to, or supported, in Commonwealth information technology.

While I believe we have together tackled and overcome some difficult challenges, I suspect the nature of progress is that yet-higher hills are still ahead — for me, for you, for my successor.

In particular, bringing automated operations successfully through the upcoming century change will continue to be a steep challenge. I have confidence that my successor inherits the right team, and the right peers and colleagues, to bring Commonwealth operations through this time, to a new century, whose technology frontiers we haven't yet imagined.

ITD's directorship is appointed by the Secretary of Administration and Finance. I know that Secretary Laskey cares that sound leadership be brought to bear on this critical area of Commonwealth operations. Stay tuned to his decisions on next steps, which will take place in a broader context of administration transition activities. David Lewis, will serve as Acting Director, Information Technology Division, as transition activity moves forward.

Thank you. I wish you good things and good luck. I remember with admiration the strong characters and workplace successes that I have had the good fortune to witness in my tenure.

Louis Gutierrez





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